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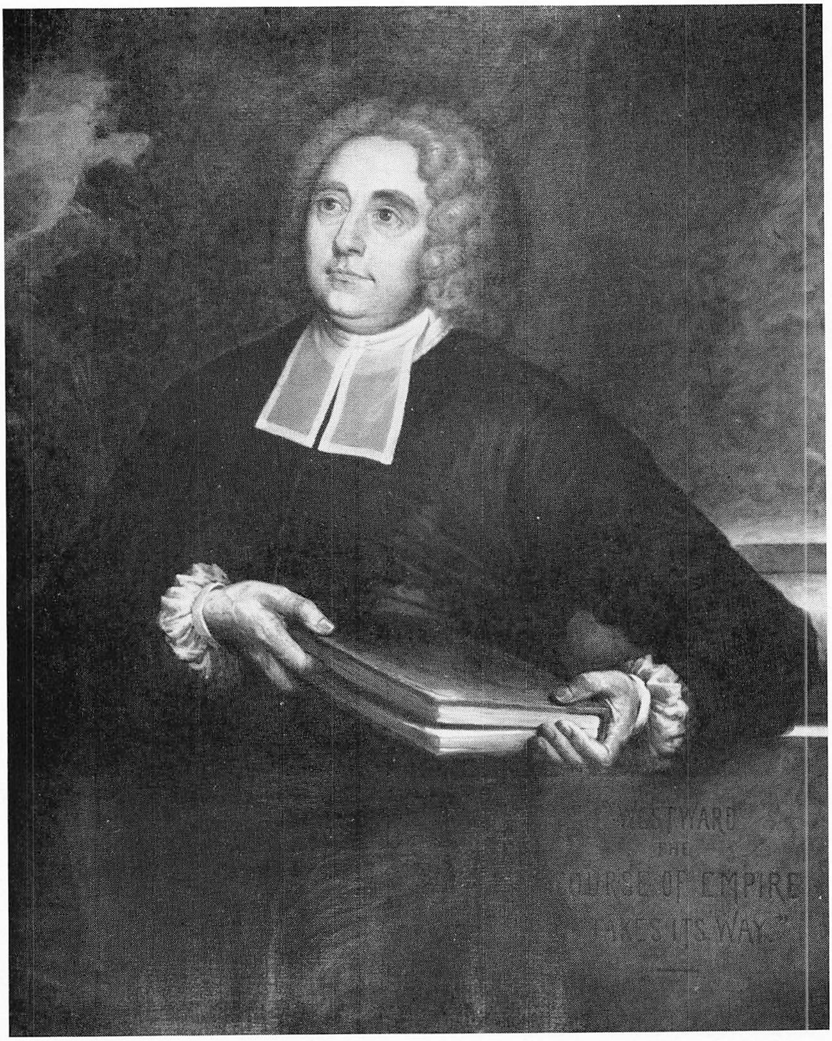

GEORGE BERKELEY, BISHOP OF CLOYNE
From a painting in the possession of
the University of California

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GEORGE BERKELEY

LECTURES DELIVERED BEFORE THE
PHILOSOPHICAL UNION
OF THE UNIVERSITY OF CALIFORNIA

In Honor of the
Two Hundredth Anniversary of the Death of
George Berkeley, Bishop of Cloyne
(1685–1753)

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PREFACE

THIS VOLUME contains the papers which were read at the University of California in commemoration of the two hundredth anniversary of the death of the Irish philosopher, George Berkeley, in 1753. It is especially appropriate that the University of California, situated in the city which bears his name, should pay homage to the memory of the man and the philosopher. This was not the first occasion on which the University honored the memory of Berkeley. In 1929 it celebrated the two hundredth anniversary of his landing on the shores of the New World, on which occasion Professor George H. Mead presented a picture of the man and an interpretation of his place in modern philosophy.

Both the character and the philosophy of Berkeley display a singular clarity and beauty, a fusion of simplicity and subtlety. He was a precocious youth, the author, when he was barely twenty, of two Latin tracts, *Arithmetica* and *Miscellanea Mathematica*. In his *Commonplace Book* there is revealed a curious combination of his interest in mathematics and his pride in being Irish. "There are men who say there are insensible extensions. There are others who say the wall is not white, the fire is not hot, &c. We Irishmen cannot attain to these truths. The mathematicians think there are insensible lines. About these they harangue: these cut in a point at all angles: these are divisible *ad infinitum.* We Irishmen can conceive no such lines. The mathematicians talk of w^t they call a point. This, they say, is not altogether nothing, nor is it downright something. Now we Irishmen are apt to think something & nothing are next neighbours."

At the age of twenty-four Berkeley published *An Essay towards a New Theory of Vision,* the first clear formulation of the insight and inspiration which all his later writings were to explore and develop. Of this new transforming principle, Berkeley later wrote: "I wonder not at my sagacity in discovering the obvious tho' amazing truth. I rather wonder at my stupid inadvertency in not finding it out before—'tis no witch craft to see."

In 1724 he was appointed Dean of Derry, and he would appear to have settled down to a scholarly life within the shelter of the church. But it was not to be. The Bermuda scheme was stirring in his mind, and he gave up the opportunity of preferment in the church at home to devote himself to this new project. In a letter to Lord Percival in 1723 he writes: "It is now about ten months since I have decided to spend the residue of my days in Bermuda; where I trust in Providence

I may be the mean instrument of great good to mankind. The reformation of manners among the English in our Western Plantations, and the propagation of the gospel among the American savages, are two points of high moment. The natural way of doing this is by founding a College or Seminary in some convenient part of the West Indies, where the English youth of our Plantations may be educated in such sort as to supply their churches with pastors of good morals and good learning—a thing (God knows) much wanted. In the same Seminary a number of young American savages may be educated till they have taken the degree of Master of Arts."

He was left a legacy of £3,000 by a lady—it was Swift's unhappy Vanessa—to whom Berkeley says he was a perfect stranger, though legend has it that she met him once at dinner. He also secured a grant of £20,000 from Parliament for his venture. But he encountered endless difficulties and delays and finally sailed to Newport, Rhode Island, where he waited five years, in vain, for the funds to start his college.

His sojourn in Rhode Island, in spite of his bitter disappointment, bore rich fruit. It was here that Berkeley composed most of the *Alciphron*. He made numerous friends, among them Samuel Johnson and Jonathan Edwards, the two leading philosophers in the New World. He made frequent visits to New Haven, and his influence was widely felt in Yale University. It so happened that the leading men who founded the University of California were Yale graduates, and when the time came to select a name for the seat of the new university, they remembered the poem which Berkeley had written:

VERSES ON THE PROSPECT OF PLANTING
ARTS AND LEARNING IN AMERICA

The Muse, disgusted at an age and clime
Barren of every glorious theme,
In distant lands now waits a better time,
Producing subjects worthy fame:

In happy climes, where from the genial sun
And virgin earth such scenes ensue,
The force of art by nature seems outdone,
And fancied beauties by the true:

In happy climes, the seat of innocence,
Where nature guides and virtue rules,
Where men shall not impose for truth and sense
The pedantry of courts and schools:

There shall be sung another golden age,
  The rise of Empire and of arts,
The good and great inspiring epic rage,
  The wisest heads and noblest hearts.

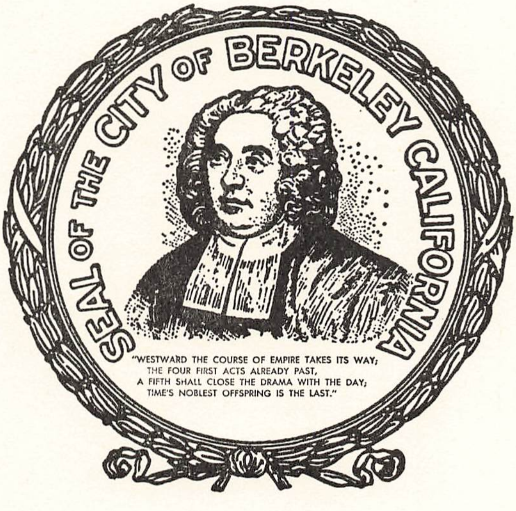
Not such as Europe breeds in her decay;
  Such as she bred when fresh and young,
When heavenly flame did animate her clay,
  By future poets shall be sung.

Westward the course of empire takes its way;
  The four first Acts already past,
A fifth shall close the Drama with the day;
  Time's noblest offspring is the last.

Upon his return to England, after spending two years in London, he was nominated to the Bishopric of Cloyne in the south of Ireland, where he spent eighteen years of almost unbroken seclusion. He resumed his devotion to philosophical studies with, as he says, "unabated attention."

The themes to which Berkeley devoted his energies relate to the perennial issues of reflective thinking. After two hundred years Berkeley's contribution to philosophy has lost little or nothing of its incisiveness and vigor, and the present volume is a simple act of piety to the memory of a philosopher to whom so very much is owed.

George P. Adams


SEAL OF THE CITY OF BERKELEY CALIFORNIA
"WESTWARD THE COURSE OF EMPIRE TAKES ITS WAY;
THE FOUR FIRST ACTS ALREADY PAST,
A FIFTH SHALL CLOSE THE DRAMA WITH THE DAY;
TIME'S NOBLEST OFFSPRING IS THE LAST."

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THE NEW REALISM OF BISHOP BERKELEY

RICHARD H. POPKIN

I am young, I am an upstart, I am a pretender, I am vain, very well. I shall Endeavour patiently to bear up under the most lessening, vilifying appellations the pride & rage of man can devise. But one thing, I know, I am not guilty of. I do not pin my faith on the sleeve of any great man. I act not out of prejudice & prepossession. I do not adhere to any opinion because it is an old one, a receiv'd one, a fashionable one, or one that I have spent much time in the study and cultivation of.[1]

WITH SUCH bravado, at the very beginning of the eighteenth century, a young Fellow of Trinity College, Dublin, George Berkeley, set to work to stem the tide of skepticism and irreligion. To accomplish this task, he developed a theory which first appeared in his *New Theory of Vision* and *Principles of Human Knowledge* in 1710 and was further developed in the *Three Dialogues* of 1713.

This bulwark against skepticism and irreligion has had a long and sad history. The young "defender of the faith" found himself immediately denounced as a fool and a madman. Those who were willing to spend the time reading Berkeley's efforts reported that, rather than being the refuter of skepticism, he was the most arrant skeptic yet. In learned comments by such eighteenth-century philosophers as Jean-Pierre de Crousaz, Andrew Baxter, Lord Kames, and Thomas Reid, Berkeley was interpreted as denying the existence of "things," and maintaining that only our "ideas" of "things" existed. They jested about the fantastic world of George Berkeley in which all the objects of ordinary existence were but ideas in the mind, and wished the kind but foolish Bishop of Cloyne well, with his mental wife, mental house, and mental food.[2]

This way of interpreting Berkeley was followed in the nineteenth century by reading the view as the claim that all is mind, i.e., a theory of mentalism, denying the existence of the sensible world. John Stuart Mill, among others, so read Berkeley.[3]

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[1] Berkeley, *Philosophical Commentaries,* in *Works,* ed. A. A. Luce and T. E. Jessop (London: Nelson, 1948–), Vol. I, p. 48; entry 465. (All my references to Berkeley's writings are to the Luce and Jessop edition of the text.)

[2] Jean-Pierre de Crousaz, *Examen du pyrrhonisme* (La Haye, 1733), p. 97, and *A New Treatise of the Art of Thinking* (London, 1724), Vol. I, p. 42; Andrew Baxter, *An Enquiry into the Nature of the Human Soul,* 2d ed. (London, 1737), Vol. II, sec. II, pp. 256–344; Henry Home, Lord Kames, *Essays on the Principles of Morality and Natural Religion* (Edinburgh, 1751), pp. 221 and 240; and Thomas Reid, *An Inquiry into the Human Mind,* I, secs. V and VII, pp. 101–102 and 103, and *Essays on the Intellectual Powers of Man,* II, chaps. x–xi, pp. 280–292, both works in *The Works of Thomas Reid, D.D.,* ed. Sir William Hamilton, 3d ed. (Edinburgh, 1852). On this way of reading Berkeley see Richard H. Popkin, "Berkeley and Pyrrhonism," *Review of Metaphysics,* V (1951–1952), pp. 223–246.

In the twentieth century a new version of the teachings of Bishop Berkeley has been advanced; namely, that with regard to the objects of sense experience, Berkeley neither denied their existence nor claimed they were mental, but rather that the objects of sense are directly perceived and exist as perceived. This reading asserts that with regard to sensible things Berkeley was a direct realist. The apostle of this startling rendition of "the fanciful theories of Bishop Berkeley" is Dr. A. A. Luce, Rector of Trinity College, Dublin, who in his many scholarly works has offered data, arguments, and interpretations to make out his thesis.[4] The core of his crusade for reading Berkeley as a common-sense realist has been a significant discovery: Berkeley's *Commonplace Book*. This work, Luce argues, was the first draft of Berkeley's immaterialism, written between 1707 and 1708 and discovered and published in 1871 in Fraser's edition of Berkeley. But Fraser did not realize what sort of manuscript he was dealing with, what most of the strange symbols represented, nor what the proper order of the entries was. Fraser printed the work as he found it. Early in the twentieth century, scholars realized that Fraser had inverted the actual order of the writings, owing to the fact that the two notebooks comprising the text had been bound in the wrong order by the British Museum. The proper order and arrangement of entries, decoding of symbols, and deciphering of deletions became Luce's twenty-year task, coming to fruition with the *editio diplomatica* of Berkeley's *Philosophical Commentaries*,[5] and revealed a Berkeley rather different from the one known hitherto. Here we had the progress of ideas: Berkeley's espousal of various theories, followed by their rejection, his struggle with different possibilities, his comments on what he was reading, the discovery of immaterialism, and his triumphant development of a system. This genesis of one of modern philosophy's great achievements was not for public consumption. Berkeley only presented us with the finished product. But here one could find a new key to what the author was after. One could sense the rejoicing of George Berkeley, almost two hundred and fifty years ago, as he found his key to demolish skepticism—the identification of ideas and things, not ideas and minds, or things and a hidden reality. One could find the youthful delight in having been the first in modern times to discover a way of defending our ordinary common-sense knowledge about the world. Descartes, Locke, Hobbes, Malebranche, and others denied the reality of the sensible world, denied that snow was really white, that fire was really hot; separated the world of appearance and the world of reality. Young Berkeley was the first to prove that the world of appearance was the real world, and in this discovery lay the bulwark against skepticism.

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[3] Mill, "Berkeley's Life and Writings," *Fortnightly Review*, XVI (July–December, 1871), pp. 505–524.

[4] A. A. Luce, *Berkeley and Malebranche* (London: Oxford Univ. Press, 1934), *Berkeley's Immaterialism* (London: Nelson, 1945), "The Berkeleian Idea of Sense," Aristotelian Society *Proceedings*, Supplementary Volume XXVII (1953), pp. 1–20, as well as the Luce-Jessop edition of Berkeley.

[5] London, 1944.

With all the excitement of the *Philosophical Commentaries* one can contrast the smirking attacks of the eighteenth-century critics. Here was a benign fool who, to protect the world from skepticism, denied that there was a real world. Andrew Baxter observed: "This is, I think, as if one should advance, that the best way for a woman to silence those who may attack her reputation, is to turn a common prostitute. He puts us into a way of denying all things, that we may get rid of the absurdity of those who deny some things."[6]

In this paper I shall try to argue for interpreting Berkeley as a common-sense, or new, realist, regarding the nature of the sense world. To do this I shall examine the historical context in which I believe his philosophy occurred, and the nature of his theory. However, when we have seen what the theory may have been when proposed in the early eighteenth century, I shall also try to argue that as a defense of direct realism it failed, and that the host of eighteenth-century critics who denounced the Bishop of Cloyne as a skeptic may have misread him, but still saw that in the end, when pressed to answer the perpetual difficulties of direct realism, Berkeley was forced to deny either common sense or "the plainest experience," and hence, in his own terms, was a skeptic.

Late in the seventeenth century a new version of Cartesianism was advanced, in part to avoid the skeptical tendencies latent in Descartes's philosophy. The great Oratorian, Father Malebranche, beginning in 1674 with the first volume of his *De la Recherche de la vérité,* proposed a new rationalism which differed from Cartesianism in two important respects. One was Malebranche's insistence that there was no rational evidence from which the existence of an external world could be demonstrated. The only evidence, Malebranche maintained, was the Word of God, viz., that the first chapter of Genesis stated that God created heaven and earth. The second difference was that Malebranche claimed that our true and certain knowledge consisted not of clear and distinct ideas in our minds, guaranteed by the two Cartesian claims that whatever is clearly and distinctly perceived is true, and that God cannot deceive us about what is clear and distinct. Instead, he declared, our true and certain knowledge consists of direct acquaintance with the ideas of things in the mind of God. Hence his famous phrase, "We see all things in God."[7]

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[6] Baxter, *Enquiry,* Vol. II, p. 284.

The rationale for the first of these was that the existence of an external world must be contingent rather than necessary. If it were necessary, it would follow that God, though all-powerful, could not make it false that "an external world exists." Hence God's power would be limited, and this limitation would follow logically from the definition of God. But it does not so follow. "The notion of the infinitely perfect Being involves no necessary relation to any created thing. God is perfectly self-sufficient. Matter is, therefore, no necessary emanation from the Divinity. At least—and this is sufficient for the present purpose—it is not evident that it is such a necessary emanation. Now, one can give no exact demonstration of a truth unless one can show that there is a necessary relation involved in the ideas which are being compared. Hence it is not possible to demonstrate rigorously that bodies exist.

"In fact, the existence of bodies is arbitrary. If any exist, it is because God has willed to create them."[8]

The second view, direct apprehension of ideas in the mind of God, derives from the fact that Malebranche takes St. Augustine much more seriously than Descartes did. The human mind is finite and powerless. In acquiring knowledge it must somehow succeed in joining its apprehending capacity to what is to be apprehended, namely, eternal ideas of essences (if we are to have true and certain knowledge). Cartesianism has two weaknesses in explicating this event called "knowing." First, what is known, the essences, cannot be part of the mind, since the mind is finite, mutable, etc., and the essences are not. Second, all power is in the Divine Substance, hence the human mind is powerless to apprehend. The Cartesian explanation of knowing can only lead to Pyrrhonian skepticism, since the Cartesian idea is only a modification of a finite soul (which is powerless to know even its own ideas), and we could never tell if these modifications conformed to the nature of things. But the Cartesian replies, the doctrine that whatever is clearly and distinctly conceived is true leads us from our ideas to reality. Malebranche rebuts, one can only accept the principle of clear and distinct ideas if *your* ideas conform to things, and "It is not at all certain that the thing does conform to your idea, but only that *you think it does*."[9] Hence, on the basis of the Cartesian theory of ideas, we can never be sure if our clear and distinct ideas are true, in the sense of being representations of the essences of things. Malebranche's solution is that when we have clear and distinct information we are in direct contact, through God's power, with a genuine immutable essence, whose locus must be the Divine Substance. Hence, we see all things in God.[10]

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[7] These views of Malebranche are expounded in detail in Nicolas Malebranche, *De la Recherche de la vérité*, ed. Geneviève Lewis (Paris: Vrin, 1946), T. I, Liv. I, chap. x and Deuxième Partie, and T. III, Eclaircissements vi and x; and *Entretiens sur la métaphysique et sur la religion*, ed. Armand Cuvillier (Paris: Vrin, 1948), T. I, Entretiens i–iii and vi.

[8] Malebranche, *Entretiens*, T. I, p. 187. I have used Morris Ginsberg's translation here, *Dialogues on Metaphysics and on Religion* (New York: Macmillan, 1923), p. 167.

This theory of Malebranche, then, portrays the world as consisting of three substances: Divine Substance, containing all power and all essences; mental substance, capable, through God's will, of being brought to a direct apprehension of essences; and material substance, the existence of which is indemonstrable, unknowable, and unimportant (but which has been revealed to us). Like Berkeley, soon after, Malebranche tried to destroy the skepticism latent in Cartesianism by denying the distinction between "idea" and "real thing"—only "real thing" for Malebranche was a kind of Platonic idea or essence. For Malebranche, rather than *esse est percipi, esse est concipi.*

Here was a new realism claiming that we are directly acquainted with the real world (albeit a shadowy, useless, physical reality, unbeknownst to us, lay lurking around somewhere). Immediately, this new realism of Malebranche was set upon by critics. The skeptic Simon Foucher attacked it and maintained that all our knowledge was only of our ideas. The so-called immutable essences were unknown, and Malebranche mistook for them the mutable ideas of extension, motion, etc., that we get from experience, which are as subjective as our ideas of color, sound, etc. We have no direct acquaintance with reality and no way of comparing our subjective world with any objective one.[11] Antoine

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[9] Malebranche, *Réponse à la troisième lettre de M. Arnauld, touchant les idées et les plaisirs,* in *Recueil de toutes les Réponses du P. Malebranche à M. Arnauld* (Paris, 1709), T. IV, pp. 51–52.

[10] *Ibid.*, p. 52, and *Recherche,* T. III, Eclaircissement x. See also Malebranche's disciple Yves André, *Discours sur la nature des idées,* in *Les Œuvres philosophiques du père André,* ed. Victor Cousin (Paris, 1843), pp. 236–246.

[11] Simon Foucher, *Critique de la Recherche de la vérité* (Paris, 1675), pp. 26–31 and 44–80, and *Réponse pour la Critique à la préface du second volume de la*

Arnauld announced that Malebranche's views, if taken seriously, tend to a very dangerous Pyrrhonism, because one would be deceived all the time in believing he knew a real physical world when actually he knew something called "intelligible extension"—the essence of matter.[12]

If we are deceived in what we are surest of, how can we trust any knowledge? "The Defender of Pyrrhonism," Pierre Bayle, joined with glee in the discussions of Malebranchism. Here he saw the ultimate triumph of Greek skepticism. Descartes had started off modern philosophy by doubting, and Malebranche ended it by making the existence of the physical world completely dubious, and our knowledge of anything open to question, since the essences which he claimed we apprehended might be appearances and not reality. The whole magnificent cosmos of rationalism might be only a modification of the mind.[13] John Locke also attacked Malebranche, insisting that his views were a flagrant violation of common sense and experience. Our knowledge does not consist of apprehension of essences in God, but of seeing trees, houses, etc., and of sensitive knowledge of the real physical world.[14]

Young Berkeley got his education in the stronghold of Malebranche in the English-speaking world—Trinity College, Dublin. He appreciated Malebranche's point that we could not demonstrate the existence of a real physical world. But he also saw Bayle's and Arnauld's point, that this was the triumph of skepticism, if skepticism was, as Berkeley defined it in the *Dialogues,* the denial of the reality of sensible things. Also, being a hardheaded youth, he saw fully the force of Locke's ridicule of Malebranchism as totally noncommonsensical. But how was all this to be resolved?

In the *Philosophical Commentaries,* especially in the comments on Malebranche and Bayle and skepticism, Berkeley went to work to explore the source of the trouble. Descartes, Hobbes, Locke, and Malebranche all held to a theory that the physical world was some hidden *X* having primary qualities. Only Malebranche realized that no evi-

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Recherche de la vérité (Paris, 1676), pp. 21–25, 42–43, 84–95, and 103–125. On Foucher's contribution to modern philosophy see R. H. Popkin, "The Abbé Foucher and the Problem of Primary Qualities," *XVII^e^ Siècle* (in press).

[12] Antoine Arnauld, *Deffense de Mr. Arnauld contre la Réponse au livre Des vrayes et des fausses idées* (Cologne, 1684), pp. 577–578, and *Lettres de Arnauld au P. Malebranche* in *Œuvres de Messire Arnauld* (Paris and Lausanne, 1775–1783), T. XXXIX, pp. 133–134.

[13] Pierre Bayle, *Dictionnaire historique et critique* (Amsterdam, 1740), T. III, art. "Pyrrho," Rem. B, p. 732. On Bayle's view see Popkin, "Berkeley and Pyrrhonism," pp. 227–231.

[14] Locke, *An Examination of P. Malebranche's Opinion of Seeing All Things in God,* in *Works* (London, 1854), Vol. II, pp. 414–458.

dence was available for the existence of this *X,* and so he moved the real world to Heaven, where by mystic union with God we could know reality. The objects of ordinary common experience were denied reality by all these thinkers. Their separation of the real physical world from ordinary experience led them to the depths of skepticism and fancy—to Bayle's conclusion that all our knowledge of the physical world consisted of ideas in the mind, or to Malebranche's world of essences. The key to the problem, Berkeley joyfully announced, lay in denying the distinction between ideas and things, in the ordinary garden-variety sense of things, rather than Malebranche's equation of things with essences. As soon as ideas and things were distinguished, skepticism was sure to ensue, since if ideas are what we can know, things can never be known.[15] So the secret, Berkeley announced at the end of the *Dialogues,* consisted in joining two claims, that of Bayle, *"the things immediately perceived, are ideas which exist only in the mind,"* and that of common sense, *"those things they* [the vulgar] *immediately perceive are the real things."*[16]

With this theory of direct realism, one could avoid the skepticism that had emerged in modern philosophy with Malebranche and Bayle, and the nonsensible realism of Malebranche. Fairly early in the *Philosophical Commentaries,* as Berkeley brooded on his philosophy in a new key, his immaterialism, he sat back and observed, "I wonder not at my sagacity in discovering the obvious tho' amazing truth, I rather wonder at my stupid inadvertency in not finding it out before."[17]

As he worked out the implications of identifying "things" and "ideas," Berkeley tried out various theories of the status of things. Are they "there" when not perceived? Are they part of the mind? etc. His explorations convinced him of two views he could not allow: (1) Any sort of dualism, differentiating thing and ideas. Things could not be powers when unperceived, since then things and ideas would differ. Any distinction would lead to a theory that behind observable things were hidden real things, and this doctrine in any form would lead to skepticism. (2) Ideas were mental, in the sense of being of the "stuff" of mind. Mind, to avoid Malebranche's views, was active—mind thought, willed, judged, etc. Ideas are totally different; they are passive, inert. Ideas are perceivable, minds are not. Hence Berkeley's insistence that the world contains two sorts of entities, namely, ideas and notions. The former constitute the world of experience, the latter the world of active agents, spirits. Ideas are hard, long, square, green, etc., but minds are not. Ideas are "in" the mind, in that they exist as percepts of a perceiver, but they are not "in" the mind in the sense of being the elements of mental substance.[18]

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[15] Berkeley, *A Treatise concerning the Principles of Human Knowledge,* in *Works,* ed. Luce and Jessop, Vol. II, secs. 86–88, 92, and 101, pp. 78–79, 81, and 85; *Three Dialogues between Hylas and Philonous,* in *Works,* Vol. II, pp. 228–229, 246, and 258; and *Philosophical Commentaries,* entry 606, in *Works,* Vol. I, p. 75.

[16] Berkeley, *Dialogues,* p. 262.

[17] Berkeley, *Philosophical Commentaries,* entry 279, p. 34.

What are the characteristics of this new realism that Berkeley offered as the bulwark against skepticism? Fundamentally, I believe, that (1) there is a world of real physical things; (2) that this world can be directly apprehended; (3) that it has no hidden nature; and (4) that it is the world known to all men directly by their senses.

A careful study of the notebooks, the *Principles,* or the *Dialogues* reveals Berkeley not as the upholder of some kind of philosophical daydream verging on total madness, but rather as a hardheaded student of philosophy who sees that modern thought has culminated in a complete denial of the existence of the ordinary world. Philosophers have succeeded "in doubting of those things which other men evidently know, and believing those things which they laugh at, and despise."[19] This strange state of affairs has resulted from the unfortunate distinction of the real nature of things and what we see. Once this distinction has been made, we can no longer be sure of any knowledge of reality, even that a real world exists. All may be illusion, for aught we can tell. Such a theory is a flagrant violation of common sense. "There are men who say there are insensible extensions, there are others who say the Wall is not white, the fire is not hot &c We Irish men cannot attain to these truths."[20]

The Irish stubbornness in Berkeley kept him immune to the philosophical daydreams of his contemporaries and made him seek a theory of knowledge which embraced the view of the vulgar—that we directly know things. The skeptics had from time immemorial insisted that what we know consists only of ideas of ours; our perceptions, sensations, etc. The arguments used to establish this view, that everything with which we are directly acquainted is a perception or idea, Berkeley found completely convincing. His new insight was to believe that this battery of argumentation to establish that our knowledge is only subjective could be made compatible with common-sense realism through the simple trick of identifying ideas and things, by maintaining that the *esse* of things was their *percipi.* Once this was done, all the strange theories of modern times could be discarded, and a philosophy could be presented that solved all problems of knowledge *and* agreed with common sense.

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[18] In the *Philosophical Commentaries,* entries 577–581, p. 72, Berkeley came to the Humean conclusion that "Mind is a congeries of Perceptions" (580), but soon gave this up for his theory of mental substance as active agent. Cf. *Commentaries,* entries 610–615, 621–631, 652–673, 684, 712–714, 828–831, 847–850, 870–872, 878, pp. 75–77, 80–83, 87, 99, 101, 103. Also *Principles,* secs. 25–29, 49, 135–142, pp. 51–53, 61–62, 103–106; and *Dialogues,* III, pp. 231–234.

[19] Berkeley, *Dialogues,* Preface, p. 167.

[20] Berkeley, *Commentaries,* entry 392, p. 47.

Throughout the notebooks, the young Berkeley keeps clapping his hands with glee at his wonderful discovery that would remove from philosophy its phantom "Reality" and replace it with common sense. "... I am but one of common sense..."[21] "The Philosophers lose their Matter, The Mathematicians loose [*sic*] their insensible sensations, the Profane their extended Deity Pray w^{t} do the Rest of Mankind lose, as for bodies &c we have them still."[22]

> I take not away substances. I ought not to be accus'd of discarding Substance out of the reasonable World. I onely reject the Philosophic sense (w^{ch} in effect is no sense) of the word substance. Ask a man never tainted with their jargon w^{t} he means by corporeal substance, or the substance of Body. He shall answer Bulk, Solidity & such like sensible qualitys. These I retain. the Philosophic nec quid nec quantum nec quale whereof I have no idea I discard. if a man may be said to discard that w^{ch} never had any being was never so much as imagin'd or conceiv'd.[23]

> N.B. I am more for reality than any other Philosophers, they make a thousand doubts & know not certainly but we may be deceiv'd. I assert the direct Contrary.[24]

> In short be not angry you lose nothing. whether real or chimerical w^{t}ever you can in any wise conceive or imagine be it ever so wild so extravagant & absurd much good may it do you. you may enjoy it for me. I'll not deprive you of it.[25]

The young Berkeley had found the secret of it all, and it turned out to be the simplest of secrets. From the earliest days of skepticism—the era of the Greek Sophists, through Pyrrho of Elis, Carneades, Aenesidemus, Sextus Empiricus, Montaigne, and Pierre Bayle—it had been argued and argued that we know only appearances, we know only how things appear to us and not how they really are. Philosophers took up the struggle to refute this horrendous doctrine by agreeing that the objects of our senses were only appearances, seemings, and then went on to describe in luscious detail the unperceived and unperceivable real world, a world which differed in almost all details from the world known to every man of common sense. The philosophers became skeptics in the end because they doubted the truths we all knew by our senses, and claimed that knowledge of things consisted in discovering the undiscoverable—the hidden nature of things. The secret, so simple, and yet so hard for all except Berkeley to see, was that the skeptical arguments were true but innocuous. We know directly only how things appear to us; but how they appear is how they are. Their appearance is their reality.

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[21] *Ibid.*, entry 368, p. 44.
[22] *Ibid.*, entry 391, p. 47.
[23] *Ibid.*, entry 517, p. 64.
[24] *Ibid.*, entry 517a, p. 64.
[25] *Ibid.*, entry 518, p. 65.

> All this scepticism follows, from our supposing a difference between *things* and *ideas,* and that the former have a subsistence without the mind, or unperceived. It were easy to dilate on this subject, and shew how the arguments urged by *sceptics* in all ages, depend on the supposition of external objects.
>
> So long as we attribute a real existence to unthinking things, distinct from their being perceived, it is not only impossible for us to know with evidence the nature of any real unthinking being, but even that it exists. Hence it is, that we see philosophers distrust their senses, and doubt of the existence of heaven and earth, of every thing they see or feel, even of their own bodies.[26]

It seemed so simple to Berkeley, then, "the same principles which at first view lead to *scepticism,* pursued to a certain point, bring men back to common sense."[27] If one just accepted Berkeley's analysis of the meaning of "existence," the refined arguments of the skeptics would substantiate the ordinary realistic views of the man in the street. The real world is the directly seen world, and this is the only physical world there is. There is no real world hiding inside appearances, or in the mind of God. The real world is right out before us, and is what it seems to be. Immaterialism was not intended as fanciful speculation, but, with regard to the physical world, as downright hard-headed common-sense realism, that any Irishman could believe. Previous philosophy portrayed a world of three components—minds, appearances, and things. Immaterialism did not deny the existence of things, but instead insisted that things and appearances were identical; as Berkeley thought, all decent ordinary people believed this anyway.

This key to all the philosopher's troubles, this refutation of skepticism, this defense of common sense fell upon deaf ears. The first public presentation of the new realism of Berkeley received only a mild horselaugh. Berkeley's friend Lord Percival reported that in London immaterialism was taken as the wildest skepticism yet, a complete denial of the existence of things in both the ordinary and the philosophical sense.[28] The learned Samuel Clarke told Percival that Berkeley's argument was clever but based on an obvious mistake. Poor Berkeley fretted and fretted, but couldn't learn what his simple error was: Clarke kept it a deep, dark secret.[29]

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[26] Berkeley, *Principles,* secs. 87–88, p. 79.

[27] Berkeley, *Dialogues,* III, p. 263.

When all of his youthful enthusiasm and great hopes of wresting philosophy from the phantoms of the metaphysicians and returning it to common sense came to naught, Berkeley marshaled all his resources in a new effort, his *Dialogues,* which would reveal his point in a clearer manner. With all the cleverness at his command, Berkeley set out in the *Dialogues* to show who were the real skeptics—the philosophers, not he, the man of common sense. In perhaps the most ingenious piece of philosophical writing in the English language, Berkeley decimated the philosophers. The representative of the philosophers, Hylas, is forced in the first and second of the *Dialogues* to admit that he knows nothing of this hidden world of matter, and that all he ever sees is the world of appearance. At the beginning of the second, he is led to deny the real existence of the world revealed to us by the senses. When Berkeley, the Philonous of the *Dialogues,* attacks this view as a skepticism that will "be thought extravagantly absurd by all men of sense," Hylas replies, "Other men may think as they please: but for your part you have nothing to reproach me with. My comfort is, you are as much a *sceptic* as I am."[30] Berkeley immediately sets to work to disprove this misreading of his views. Hylas, starting with the distinction between things and ideas, is led to deny the reality of the sense world because it consists of ideas alone. Philonous does not hold to the premises which lead to this skeptical conclusion. He identifies ideas and things, and *because* the sense world consists of ideas, concludes that it is a real world which exists independently of me since it depends not on my thoughts, but on God's.[31]

The contrast between Berkeley's realism and Hylas' skepticism is made even more forcefully in the Third Dialogue. The drama opens with Hylas a beaten man, reduced to a "forlorn scepticism," announcing "that all our opinions are alike vain and uncertain," that we cannot know the real nature of anything, even whether it actually exists. All our beliefs about the world in which we live are mistaken. We know only appearances, never reality.[32]

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[28] Sir John Percival's letter to Berkeley, August 26, 1710, printed in Benjamin Rand, *Berkeley and Percival* (Cambridge Univ. Press, 1914), pp. 80–81.

[29] Percival to Berkeley, October 30, 1710, and December 28, 1710, and Berkeley to Percival, November 27, 1710, and January 19, 1711, in Rand, *op. cit.,* pp. 87–89, 92–94.

[30] Berkeley, *Dialogues,* II, p. 211.

[31] *Ibid.,* II, pp. 211–212.

Here is Bayle's Pyrrhonism, the unfortunate issue of the course of seventeenth-century philosophy. The road from Descartes to Malebranche and Locke turns out to be the highway to Pyrrhonism—to complete doubt. And Hylas proclaims that "the very top and perfection of human knowledge" is to know that we know nothing.[33]

This sad state of complete doubt Berkeley contrasts with his own views. Unlike Hylas, Philonous declares, "I am of a vulgar cast, simple enough to believe my senses, and leave things as I find them. To be plain, it is my opinion, that the real things are those very things I see and feel, and perceive by my senses."[34] These real things are directly perceived by me, but they exist independently of me as percepts of the Eternal Mind, God. "Away then with all that scepticism," Philonous tells Hylas, "all those ridiculous philosophical doubts."[35] The real world has been discovered right before our eyes. It is the very world we perceive.

At the conclusion of the *Dialogues,* Philonous, in summing up for Berkeley, announces the marriage of two principles: common sense, that what we directly perceive is the real things; and skeptical philosophical reflection, that what is directly perceived consists of ideas in the mind—"Which two notions put together, do in effect constitute the substance of what I advance."[36]

Here, then, was Berkeley's realism, set forth in its strongest terms. Here was an amazingly simple solution to the problem of knowledge which would simultaneously destroy the hidden reality the dogmatic philosophers were seeking, and the doubts of the skeptics, and restore to a place of honor the principles of common sense. Such a victory should be worthy of the greatest possible honors. Instead it gained only petty sneers. What was wrong? Berkeley, in his *Dialogues,* made his insight as plain as possible; he offered to all men his simple solution to the problems that beset the philosophical world.

The fault, I believe, lay not so much in the reader's refusing to take the author seriously as in the failure of the proposal offered. It was too simple, and by its attempted simplicity it failed to solve the problem at issue. And in the end, if the failure were pressed far enough, it would drive the author to the skepticism he so much deplored, the denial of common sense. It was not that a great philosophical conquest lay unrecognized and the philosophical world continued for two hundred and fifty years to belabor a problem already solved, but rather that Berkeley's solution did not actually bridge the gulf between common sense and philosophical reflection. The happy marriage he had arranged between the two parties proved in very short order to be unworkable. There was complete incompatibility between the two parties, and one would have to side either with common sense or with philosophical reflection.

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[32] *Ibid.,* III, p. 227.
[33] *Ibid.,* III, p. 228.
[34] *Ibid.,* III, p. 229.
[35] *Ibid.,* III, p. 230.
[36] *Ibid.,* III, p. 262.

Why had philosophical reflection always conflicted with common sense on the reality of the sense world? Almost every modern philosopher had begun his investigation of the world with a withering attack on common-sense realism. The assault was usually the same as that employed in antiquity—the problem of illusion. We could not directly perceive real objects because quite often what we perceived was illusory, or our views of objects varied depending on our location, disposition, etc. Hence the real objects could not *always* be those we directly perceive. But we had no way of being sure when we directly perceived objects and when we were in error. Montaigne, Gassendi, Bacon, and others presented all the traditional skeptical arguments against direct realism. Hence, the philosophers concluded, what we were directly aware of by perception was only appearances in our own minds, not real objects. The true things of this world, the "new" philosophers maintained, were uncovered not by looking, because of the errors of sense, but by scientific analysis, either in the style of Sir Francis Bacon, by means of instruments, i.e., the telescope, the microscope, etc.; or in the style of Descartes and Malebranche, by geometrical analysis. The real objects so revealed bore little or no resemblance to the apparent objects of common sense.

Berkeley was well aware of the arguments from illusion. He employs them with devastating results in the *Principles* and the *Dialogues* to show that the "new" philosophers have no way of discovering the existence or nature of their hidden reality, and that the theory of the existence of an unperceived real world leads straight away to skepticism. But can Berkeley's new realism fare any better with the traditional difficulties? Would the identification of things and ideas, the denial of a hidden reality, render the problem of illusion innocuous? Could Berkeley's simple solution to the philosophical difficulties of the world bridge the apparently fatal gap between common-sense objects and scientific ones?

At first Berkeley apparently saw no difficulties. The notebooks never deal with the issues involved. In the *Principles,* Berkeley briefly discusses the status of scientific discoveries in his view, as one of a long list of objections to his theory. Here he finds nothing much to deal with.[37] But in the Third Dialogue, in dealing with objections that have been raised, the problem of illusion is faced, and revealed to be the rock on which the new realism founders.

The arguments from illusion had been the spawning ground of the philosophers' rejection of common sense. Berkeley, at all costs, wished to avoid the usual ways of meeting the issue, either to offer a theory that real objects were radically different from directly perceived ones, or to deny that real objects were ever discoverable. Hence, regardless of the consequences, Berkeley insisted that even in cases of illusion what we directly perceived was real objects. Each percept was a real thing which existed as perceived. Each percept was not a way of seeing a given object, an aspect of a particular thing, but was the very thing itself.

The problem is first raised by Hylas' inquiry, "What say you to this? Since, according to you, men judge of the reality of things by their senses, how can a man be mistaken in thinking the moon a plain lucid surface, about a foot in diameter; or a square tower, seen at a distance, round; or an oar, with one end in water, crooked?"[38]

Berkeley's answer is that no one is mistaken about what he actually sees. Error or illusion is not in the percept, for that is the actual object. Mistakes occur when one infers from what one sees to what one will see next. For example, one sees a bent oar in the water. If one then expects that one's next perception, when the oar is removed from the water, will be similar, then one is in error. Each percept is correct in that it is, not represents, the things of this world.[39]

If this is so, then is the oar bent or straight? the tower round or square? Is a mite the dot we see, or the complex organism revealed by the microscope? The question, Berkeley insisted, was a false one based on the assumption that there is one single, unchanged, real nature designated by the terms "oar," "tower," "mite," etc. Actually, since each percept is a real thing, existing independently, the successive percepts are not different views of the same thing, but rather a sequence of related things. For convenience, since our language has not a sufficient store of names, we do not designate each percept by its own individual label. We give the same name to a sequence of connected percepts. But this does not mean that they are percepts of the same thing. They are in fact different things, but related, and giving them the same name is innocuous as long as we do not insist that they are the same entity. When I look through the microscope, when I squint, when I look through colored glasses, I do not see another version of what I see ordinarily with the naked eye under normal conditions. Each looking perceives a different object.[40] And each and every percept is a real object. No illusory perceptions exist. Every view of a table—from one inch away, from on top, from underneath, from a mile away, etc.—is not a different view of the same object, but a direct acquaintance with a separate and distinct object, each related lawfully to the others. Fanciful objects differ from real things only in that they are not regularly connected with other percepts or things.[41]

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[37] Berkeley, *Principles,* sec. 58, pp. 65–66.

[38] Berkeley, *Dialogues,* III, p. 238.

[39] *Ibid.,* p. 238.

This analysis of the problem of sense illusions that Berkeley offered revealed a new view—phenomenalism. And this excursion into phenomenalism, one of the most fruitful and fruitless issues of Berkeley's appearance on the philosophical scene, was a bold denial of common-sense realism. What man in the street believed that each percept was a separate thing? The ordinary man believed that the bent oar and the straight oar were the same oar. When pressed he might not be able to decide what the real oar was like, but he certainly believed that there was only one object seen in different ways. Common sense on this matter might be indefensible philosophically, but no matter how absurd it might be when theoretically analyzed, the ordinary view was, and is, that we directly perceive objects and that the objects directly perceived are the total real objects, not just the peculiar percepts we may have from some vantage point. Thus, though from one corner of the room I may see only three legs of a chair, I believe, when not philosophizing, that what I actually see is a chair which has four legs. I do not believe that the three-legged chair is real, the four-legged chair real also, and that though they are distinct percepts, and hence distinct objects, that I call them the same chair solely for convenience.

To avoid the hidden realism of his predecessors, Berkeley momentarily denied common-sense realism as well. As soon as the problem was no longer under consideration, he ceased maintaining that the marriage of common-sense realism and philosophy was a marriage of convenience, but instead returned to his old ways of asserting that it was an idyllically happy marriage, without quarrels and without difficulties.

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[40] *Ibid.*, p. 245.

[41] *Ibid.*, pp. 235, 245–246.

But the brief separation of philosophy and common sense was more revealing than Berkeley realized. It showed what had always been suspected—the two views were basically incompatible. The philosophical analysis of naïve realism led, via the problem of illusion, from ancient times to modern days, to the theory that all that we are ever acquainted with is percepts of ideas in our own minds. The number of percepts or ideas far exceeded in number and variety the objects ever admitted by naïve realism. Hence the philosophers maintained that our percepts could not be the real things of this world, and therefore real things were not directly perceived.

David Hume, who often asserted that common-sense realism was a natural, instinctive belief that we could not avoid holding, pointed out that "when we compare experiments, and reason a little upon them," this view "is contrary to the plainest experience."[42] The experiments he offered were cases of illusion—double images, perspective problems, etc. In these, he insisted, we do not attribute real existence to what we perceive, but instead conclude that what we perceive depends upon us and exists only in us. And this leads us finally to the denial of ordinary realism, namely, to the view "that our sensible perceptions are not possest of any distinct or independent existence."[43]

Berkeley avoided this skeptical conclusion about our ordinary realist beliefs by offering, when the occasion demanded, a thoroughly noncommonsensical view, that every percept is a real object. This might dispose of the dangers that had always arisen when philosophers considered the problems of sense illusion, but it did so at the expense of the "new" realism which the young Berkeley had announced with such glee—at the expense of the idea that common-sense realism and philosophical subjectivism could be held simultaneously. The result, only briefly revealed in the Third Dialogue, was a different sort of skepticism—a denial of the truth of common-sense realism. Berkeley may have escaped the skepticism which he saw implicit in Descartes, Hobbes, Locke, and Malebranche, and the Pyrrhonism that horrified him in Bayle. But to avoid their pitfalls, and still to render the problems of sense illusion innocuous, he had to succumb to what in his own terms was a different brand of skepticism, the rejection of common sense.

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[42] Hume, *A Treatise of Human Nature*, ed. L. A. Selby-Bigge (Oxford: Clarendon Press, 1951), Bk. I, Pt. IV, sec. II, p. 210.

[43] *Ibid.*, p. 211.

Thus Berkeley, by readjusting Malebranche's form of direct realism, intended to solve all philosophical difficulties, to refute skepticism and atheism, and to return mankind to the principles of common sense, by the pronouncement of his new realism. He discovered, and managed to ignore, that his simple solution to all the philosophical ills of the day was in reality not a solution compatible with ordinary direct realism.

Berkeley's eighteenth-century critics, though they misread him and misrepresented his teachings, though they belabored him for maintaining a kind of philosophical foolishness that could only end in complete and total skepticism, still came somewhat closer to the mark than most of Berkeley's readers. The eighteenth-century critics were, by and large, too dazzled by the amazing claim of Berkeley's philosophical reflections—that all we are ever aware of is ideas in our mind—to consider the possibility that the same man who believed this also believed in naïve realism.

A typical eighteenth-century comment on Berkeley's views is that of Lord Kames, who wrote:

> A late author, who gives us a treatise concerning the principles of human knowledge, by denying the reality of external objects, strikes at the root of the authority of our senses, and thereby paves the way to the most inveterate scepticism. . . . It is reported, that doctor Berkeley, the author of the above mentioned tratise, was moved to adopt this whimsical opinion, to get free of some arguments, urged by materialists against the existence of the Deity. If so, he has been unhappy in his experiment; for this doctrine, if it should not lead us to universal scepticism affords, at least, a shrewd argument in favours [*sic*] of Atheism. If I can only be conscious of what passes in my own mind, and if I cannot trust my senses, when they give me notice of external and independent existences; it follows, that I am the only being in the world; at least, that I can have no evidence from my senses, of any other being, body or spirit.[44]

Of course, Berkeley held only half of what Kames attributed to him. But, apparently, Kames and his Scottish contemporaries could not imagine that a man who asserted that we are only aware of what passes in our own minds could do other than deny that our senses reveal the real world to us.

A more careful and more relevant analysis of the strange views of Bishop Berkeley was set forth by Scotland's leading advocate of common-sense realism, Thomas Reid. He read Berkeley's text in all its fullness and observed that though Berkeley asserted and argued for the view that we are only aware of ideas in the mind, Berkeley also claimed over and over again that he was arguing for the views of common sense, and that he showed great concern "to reconcile his system to the plain dictates of nature and common sense."[45] But, Reid noted, "it seems no easy matter to make the vulgar opinion and that of Berkeley to meet."[46] The author struggled, by distorting both common sense and his own immaterialism, to pull the two together, but Reid insisted that in so doing he had to deny certain elements of common-sense realism involving the belief in absolutely independently existing things. The net result, when finally pressed through all the difficulties which beset the intended reconciliation, was not the meeting of common sense and philosophical reflection, as Berkeley had hoped for, but the flagrant denial of common sense. When all the twisting and turning, the bending and stretching, were over, Reid claimed, what was left ultimately was fantastic views such as, "What I call a father, a brother, or friend, is only a parcel of ideas in my own mind."[47] And of such views the sober Scotch philosopher could only observe: "Of all the opinions that have ever been advanced by philosophers, this of Bishop Berkeley, that there is no material world, seems the strangest, and most apt to bring philosophy into ridicule with plain men who are guided by the dictates of nature and common sense."[48]

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[44] *Essays on the Principles of Morality and Natural Religion* (Edinburgh, 1751), pp. 240–241.

The reason for this, Reid believed, was that Berkeley would not make the effort necessary to adhere genuinely to the realism of ordinary men. To do this, instead of trying to wed the philosophical doctrine that all that we are directly aware of is ideas in our own minds to naïve realism, he would have to abandon the philosophical view, for Reid believed that therein lay the source of the trouble. However, as we have seen, when faced with a choice, Berkeley abandoned common sense instead.

I should like to conclude with a comment by Scotland's greatest philosopher of the eighteenth century, David Hume. Hume never took Berkeley's professed realism seriously, and observed at one point that Dr. Berkeley's writings "form the best lessons of scepticism which are to be found either among the ancient or modern philosophers, Bayle not excepted . . . that all his arguments, though otherwise intended, are, in reality, merely sceptical appears from this, *that they admit of no answer and produce no conviction.* Their only effect is to cause that momentary amazement and irresolution and confusion, which is the result of scepticism."[49]

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[45] Reid, *Essays on the Intellectual Powers of Man,* Essay II, chap. x, p. 284.

[46] *Ibid.,* p. 284.

[47] *Ibid.,* p. 285.

[48] *Ibid.,* p. 285.

[49] Hume, *An Enquiry concerning the Human Understanding,* ed. L. A. Selby-Bigge (Oxford: Clarendon Press, 1951), Sec. XII, pt. II, p. 155 n.

The young Berkeley had hoped to usher in a new era of philosophy; to free that noble enterprise from the confusion, madness and skepticism that had overtaken it. He offered the learned world his simple remedy to all its troubles—his new realism, compounded of common sense and philosophical reflection. Unfortunately, though the author refused to recognize it, the ingredients refused to blend, and the new realism turned out to be a new skepticism—a flagrant denial of common sense. Instead of achieving the task announced on the title page of his *Three Dialogues,* "The design of which is plainly to demonstrate the reality and perfection of human knowledge,"[50] he only succeeded in causing "momentary amazement and irresolution and confusion."

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[50] Berkeley, *Dialogues,* title page, p. 147.

BERKELEY'S ATTACK ON MATTER

CELESTINE J. SULLIVAN, JR.

> MATTER being once expelled out of nature drags with it so many sceptical and impious notions, such an incredible number of disputes and puzzling questions, which have been thorns in the sides of divines as well as philosophers, and made so much fruitless work for mankind, that if the arguments we have produced against it are not found equal to demonstration (as to me they evidently seem), yet I am sure all friends to knowledge, peace, and religion have reason to wish they were.

THIS quotation,[1] taken somewhat at random from the writings of George Berkeley, gives typical expression to something which he conceived to be an activity of primary importance and in which he thought he had been eminently successful, namely, the elimination of any rational grounds for belief in matter, an achievement which he firmly believed would silence once and for all that motley crew of skeptics and atheists for whom he had particular abhorrence, and the routing of whom was his chief practical object in the composition of his *Principles of Human Knowledge,* "wherein," as he says on the title page, "the chief causes of error and difficulty in the sciences, with the grounds of scepticism, atheism, and irreligion, are inquired into."

How successful was Berkeley, not in the routing of skeptics and atheists (for into that practical end of his endeavor I shall not here inquire), but, in his philosophical attack on matter, in pressing his claim that there are no rational grounds for belief in matter?

Now in philosophy, as elsewhere, much turns on definition, and at the outset it should be noted that it was not just any definition of matter that concerned Berkeley or that is here in question. As Philonous so graciously indicates to Hylas near the end of their Third Dialogue, " . . . retain the word *Matter,* and apply it to the objects of sense, if you please; provided you do not attribute to them any subsistence apart from their being perceived. I shall never quarrel with you for an expression." (483.) Nevertheless, as he goes on to say, "the word *Matter* should be never missed in common talk. And in philosophical discourses it seems the best way to leave it quite out: since there is not, perhaps, any one thing that hath more favoured and strengthened the depraved bent of the mind towards Atheism than the use of that general confused term." (483.) Although the very word "matter" was almost anathema to this fiery nominalist, he recognized that it was so because of its common philosophical connotation and not because of any magic about the term itself. It was this connotation, as he understood it, that concerned him and here concerns us.

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[1] From Berkeley's *Works,* ed. A. C. Fraser (Oxford: Clarendon Press, 1901), Vol. I, pp. 310–311. All my quotations from Berkeley are from this volume. The numbers in parentheses in my text are the page numbers.

To make our inquiry still more precise, however, it should be noted further that just as I am not here concerned with all possible definitions of matter, which indeed, as far as I can see, are without number, so I am not primarily concerned, or concerned at all except where my words so indicate, with the historical accuracy of Berkeley's account of what the philosophers understood by "matter," though where I consider it relevant I may comment on such matters and may myself on occasion introduce references to one or another philosopher other than Berkeley. What is of primary interest to me, however, is the nerve of Berkeley's argument and its significance.

What did Berkeley understand by that matter which he sought to expel from nature? "By Matter," he says, where he first introduces the term in the *Principles of Human Knowledge,* "... we are to understand an inert, senseless substance, in which extension, figure, and motion do actually subsist. But it is evident, from what we have already shewn, that extension, figure, and motion are only ideas existing in the mind, and that an idea can be like nothing but another idea; and that consequently neither they nor their archetypes can exist in an unperceiving substance. Hence, it is plain that the very notion of what is called *Matter* or *corporeal substance,* involves a contradiction in it. Insomuch that I should not think it necessary to spend more time in exposing its absurdity. But, because the tenet of the existence of Matter seems to have taken so deep a root in the minds of philosophers, and draws after it so many ill consequences, I choose rather to be thought prolix and tedious than omit anything that might conduce to the full discovery and extirpation of that prejudice." (262.)

Here it is indicated that Berkeley's basic argument against the reality of matter is that the very notion of what is called matter involves a contradiction in it. All else is but a series of devices to conduce to the full discovery and extirpation of what is thus revealed to be a prejudice. Berkeley can and does put on the robes of the skeptic, most elaborately in the *Dialogues between Hylas and Philonous,* but this is only a device to loosen the hold of prejudice and prepare the way for the true light of knowledge, the realization of the convincing proof of the repugnancy of matter. Berkeley himself is fully aware that the relativity of perception does not disprove the existence of qualities unperceived, for he says "... it must be confessed this method of arguing [from the relativity of perception] does not so much prove that there is no extension or colour in an outward object, as that we do not know by sense which is the true extension or colour of the object." (265.) But he is not above employing such arguments to weaken belief in matter, which belief he can then finally dispatch with the conclusive proof of its repugnancy. Berkeley, since his convictions are held passionately and his end is persuasion, argues at times more like a criminal lawyer than a philosopher. He first gets the jury in a mood to doubt the good character of the defendant, and then he presents the evidence, or supposed evidence, for the crime. That is, he follows this order precisely in the *Dialogues,* though in the *Principles* he presents first the argument he regards as conclusive and follows it with all his devices of persuasion, including the presentation of the nature of matter in a less favorable light than he gives it at the outset, a presentation which, even in the eyes of its proponents, makes of matter a something they know not what, or a useless body of ideas in God's mind on the occasion of which He acts.

But though Berkeley stoops to rhetorical and sophistical devices in order to conquer, he time and again registers his annoyance with the stupidity of those who do not have the intelligence to grasp the repugnancy of matter, or of anything indeed whose being is neither to perceive nor to be perceived. Thus he follows the statement quoted above, in which he confesses that the relativity of perception does not prove the nonexistence of matter, with the statement that "the arguments foregoing [the arguments associating being essentially with perception] plainly shew it to be impossible that any colour or extension at all, or other sensible quality whatsoever, should exist in an unthinking subject without the mind, or in truth that there should be any such thing as an outward object." (265.) And again, "But why should we trouble ourselves any farther, in discussing this material *substratum* or support of figure and motion and other sensible qualities? Does it not suppose they have an existence without the mind? And is not this a direct repugnancy, and altogether inconceivable?" (266.) Or again, "I am afraid I have given cause to think I am needlessly prolix in handling this subject. For, to what purpose is it to dilate on that which may be demonstrated with the utmost evidence in a line or two, to any one that is capable of the least reflexion?" (269.) And he prefaces his answers to possible objections to his principles with the statement that "... if I seem too prolix to those of quick apprehensions, I desire I may be excused, since all men do not equally apprehend things of this nature; and [he adds graciously] I am willing to be understood by every one." (275.) By which, I take it, he means he is willing to be understood by the philosophers as well as the mob, with whom he claims to stand. But in order that I not be thought to be too prolix, let me come to grips with Berkeley's reasoning concerning the repugnancy or contradictoriness of the very conception of matter.

However, before I leave this theme, I would remark that although Berkeley claimed to speak for the mob as against the philosophers, he also claimed the opposite when this seemed to suit his purpose. Taking up the objections to his principles one by one:

> *Seventhly* [he says], it will upon this be demanded whether it does not seem absurd to take away natural causes, and ascribe everything to the immediate operation of spirits? We must no longer say upon these principles that fire heats, ... and so forth. Would not a man be deservedly laughed at, who should talk after this manner?—I answer, he would so: *in such things we ought to think with the learned, and speak with the vulgar.* [Italics mine.] They who to demonstration are convinced of the truth of the Copernican system do nevertheless say 'the sun rises;' 'the sun sets;' or 'comes to the meridian'; and if they affected a contrary style in common talk it would without doubt appear very ridiculous. A little reflection on what is here said will make it manifest that the common use of language would receive no manner of alteration or disturbance from the admission of our tenets.
>
> In the ordinary affairs of life, any phrases may be retained, so long as they excite in us proper sentiments, or dispositions to act in such a manner as is necessary for our well-being, how false soever they may be if taken in a strict and speculative sense. Nay, this is unavoidable, since, propriety being regulated by custom, language is suited to the received opinions, which are not always the truest. Hence it is impossible—even in the most rigid, philosophical reasonings—so far to alter the bent and genius of the tongue we speak as never to give a handle for cavillers to pretend difficulties and inconsistencies. But, a fair and ingenuous reader will collect the sense from the scope and tenor and connexion of a discourse, making allowances for those inaccurate modes of speech which use has made inevitable. [285–286]

Let anyone who sees in Berkeley the great defender of common sense take note of the passage just quoted. Berkeley does, indeed, defend the use of ordinary language, but in a Janus-faced or ambiguous way. When turned toward the masses, such language is meant to convince them that he thinks as they do, that just as they take what they see to be real things, so does he; but when turned toward the philosophers, such language is to be understood as an instance of propriety, an accommodation in speech only to received opinions, which are not always the truest. Thus, Berkeley excuses in the following way the manner in which he writes in the *Essay towards a New Theory of Vision* of tangible objects as without the mind: "That the proper objects of sight neither exist without the mind, nor are the images of external things, was shewn even in that treatise. Though throughout the same the contrary be supposed true of *tangible objects* [Berkeley's italics];—not that to suppose that *vulgar error* [italics mine] was necessary for establishing the notion therein laid down, but because it was beside my purpose to examine and refute it, in a discourse concerning *Vision*." (280.) But I ask you, who would have guessed, reading the *Essay on Vision* alone, that Berkeley denied the reality of things with primary qualities outside the mind, qualities, too, apprehended immediately by the sense of touch? And remember, too, such a view, which is there clearly held as far as the language goes, is described in the passage quoted above as a *vulgar error,* and one that Berkeley knew to be such when he wrote as though he held it.

How serious, then, was Berkeley in claiming to stand with the mob, a claim he asserted in his early notebooks and elaborated in the *Dialogues between Hylas and Philonous,* a claim, so far as I can see, that is the only basis for calling Berkeley a realist, new or otherwise? To be sure, Philonous, speaking for Berkeley, says, "I am of a vulgar cast, simple enough to believe my senses, and leave things as I find them." (445.) But what does he mean? Just how vulgar was he, or just how Berkeleian did he think the vulgar? A partial answer to these questions is to be found, I believe, in the penultimate statement by Philonous in the Third Dialogue. Here he says: "I do not pretend to be a setter-up of new notions. My endeavours tend only to unite, and place in a clearer light, that truth which was before shared between the vulgar and the philosophers:—the former being of opinion, that *those things they immediately perceive are the real things;* and the latter, that *the things immediately perceived are ideas, which exist only in the mind.* Which two notions put together, do, in effect, constitute the substance of what I advance." (484.) Berkeley conceived himself to be thus far vulgar, that he thought that those things immediately perceived are the real things, and thus far philosophical, that he thought these same things are ideas. But it also seems to be clearly indicated that he thought the philosophers did not think these same things real and the vulgar did not think them ideas. That is, the vulgar are not Berkeleian in supposing that the being of what they perceive is to be perceived, and how Berkeleian is anyone who does not hold this, or how vulgar is anyone who does? And how much agreement is there between two persons who hold the same things to be real, but one holds that the reality of these things is to be perceived, and the other that they are real because they exist when they are not perceived? So much agreement there is between Berkeley and the vulgar, and he knew it, yet spoke of himself as vulgar—at times, and at times not. Make of this what you will. For my part, it seems like double talk and not to be taken seriously, that is, not to be taken as having any serious bearing on Berkeley's philosophy, concerning the question whether, for example, his position is that of common sense or ordinary language, though to be sure it is a serious psychological and perhaps sociological question why Berkeley sought to please both the masses and the philosophers and why he thought of himself as a friend of both. A serious probing of this question might reveal some interesting facts about Berkeley, as well as suggest some of the motivations of our present defenders of common sense and ordinary language in uncommon and extraordinary ways; but such is not my present purpose.

Suffice it for the present aside, that if there be any who doubt that Berkeley thought of the vulgar as absolutely at variance with him on *esse* is *percipi*, and hence, absolutely at variance with him on a basic tenet of his philosophy, I would direct their attention, in addition to the penultimate statement by Philonous, to the following statement in the *Principles:*

> But it is demanded that we assign a cause of this prejudice [belief in matter, that is], and account for its obtaining in the world. To this I answer, that men knowing they perceived several ideas, whereof they themselves were not the authors, as not being excited from within, nor depending on the operation of their wills, this made them maintain *those* ideas or objects of perception, had an existence independent of and without the mind, without even dreaming that a contradiction was involved in those words. But, philosophers having plainly seen that the immediate objects of perception do not exist without the mind, they in some degree corrected *the mistake of the vulgar* [italics mine]; but at the same time run into another, which seems no less absurd, to wit, that there are certain objects really existing without the mind, or having a subsistence distinct from being perceived, of which our ideas are only images or resemblances, imprinted by those objects on the mind. [288]

The vulgar and the philosophers differ regarding the status of what they perceive, the vulgar taking those things to be real which the philosophers take to be images, but they agree in supposing that real things, whether perceptions or the causes of perceptions, can and do exist independently without the mind, they agree in supposing there is a real material world. This is their common error, according to Berkeley, an absurdity as great in the one case as in the other, for it is the same absurdity in both, the absurdity of supposing that anything perceived, or anything like anything perceived, can exist unperceived. Had Berkeley been more forthright, more like a prophet of old than an eighteenth-century gentleman, he might have said to both the philosophers and the vulgar, "A plague on both your houses. To be is either to perceive or to be perceived."

But what is it, the being of which is to be perceived? An idea, this is that the being of which is to be perceived. And how do we know this? By definition (cf. 258, par. 2, where spirit and idea are distinguished). In the Third Dialogue, Philonous says, "I own the word *idea,* not being commonly used for *thing,* sounds something out of the way. *My reason for using it was, because a necessary relation to the mind is understood by that term* [italics mine]; and it is now commonly used by philosophers to denote the immediate objects of the understanding." (453.) So Berkeley claimed that the being of ideas is to be perceived, but, since this is only a matter of definition, what is more to the point for us in considering Berkeley's attack on matter is to observe that within the class of ideas so defined Berkeley placed all the objects of sense and their supposed archetypes. Is this too by definition? Evidently not, for Berkeley regards this as his great discovery, that sensible things and their supposed archetypes are ideas, or things the being of which is to be perceived, a discovery, however, of a truth so near and obvious to the mind that a man need only open his eyes to see it. (260.) Let us open our eyes and see if we can see it.

But first let us note again that it is not only sensible things but their supposed archetypes that are said to be ideas, and this on the ground that "an idea can be like nothing but an idea." (261.) But, you may question, just how obvious is it that an idea can be like nothing but an idea? What is to the point here, however, is why Berkeley thought this obvious, and to answer this question I think we must first answer the question why Berkeley thought it obvious that sensible objects are ideas. When we see why he thought that sensible objects are ideas, we shall understand why he thought only an idea can be like an idea, for the answer to both questions is the same. Why, then, is it obvious that sensible objects are ideas?

When we look to Berkeley for evidence for this all-important insight, we find that he indeed speaks like a prophet, or one inspired from on high, but the reason for his speech is a bit hard for me to decipher.

> That neither our thoughts, nor passions, nor ideas formed by the imagination [he says], exist without the mind is what everybody will allow. And to me it seems no less evident that the various sensations or ideas imprinted on the Sense, however

> blended or combined together (that is, whatever objects they compose), cannot exist otherwise than in a mind perceiving them. I think an intuitive knowledge may be obtained of this, by any one that shall attend to what is meant by the term *exist* when applied to sensible things. The table I write on I say exists; that is, I see and feel it: and if I were out of my study I should say it existed; meaning thereby that if I was in my study I might perceive it, or that some other spirit actually does perceive it. There was an odour, that is, it was smelt; there was a sound, that is, it was heard; a colour or figure, and it was perceived by sight or touch. This is all that I can understand by these and the like expressions. For as to what is said of the *absolute* existence of unthinking things, without any relation to their being perceived, that is to me perfectly unintelligible. Their *esse* is *percipi;* nor is it possible they should have any existence out of the minds or thinking things which perceive them. [258–259]

That Berkeley holds that the being of sensible things is to be perceived is obvious, that he holds that we have an intuitive knowledge of this is equally obvious, as likewise that he holds that to suppose an existence of unthinking things without the mind is perfectly unintelligible. He tells us all this, not only once but time and again, but where is the evidence, where is the intuition that it is so?

To solve this mystery, for such it has often appeared to me, let us first turn to the *Dialogues,* and let us follow a bit of the conversation in the First Dialogue:

> HYL. What more easy than to conceive a tree or house existing by itself, independent of, and unperceived by, any mind whatsoever? I do at this present time conceive them existing after that manner.
>
> PHIL. How say you, Hylas, can you see a thing which is at the same time unseen?
>
> HYL. No, that were a contradiction.
>
> PHIL. Is it not as great a contradiction to talk of *conceiving* a thing which is *unconceived?*
>
> HYL. It is.
>
> PHIL. The tree or house therefore which you think of is conceived by you?
>
> HYL. How should it be otherwise?
>
> PHIL. And what is conceived is surely in the mind?
>
> HYL. Without question, that which is conceived is in the mind.
>
> PHIL. How then came you to say, you conceived a house or tree existing independent and out of all minds whatsoever?
>
> HYL. That was I own an oversight; but stay, let me consider what led me into it.—It is a pleasant mistake enough. As I was thinking of a tree in a solitary place, where no one was present to see it, methought that was to conceive a tree as existing unperceived or unthought of; not considering that I myself conceived it all the while. But now I plainly see that all I can do is to frame ideas in my own mind. I may indeed conceive in my own thoughts the idea of a tree, or a house, or a mountain, but that is all. And this is far from proving that I can perceive them *existing out of the minds of all Spirits.* [411–412]

This engaging proof of the position that the being of what is perceived is to be perceived is stated more succinctly in par. 23 of Part I of the *Principles of Human Knowledge,* where it is said that to show "you can conceive it possible the objects of your thought may exist without the mind . . . it is necessary that you conceive them existing unconceived or unthought of; which is a manifest repugnancy." (269–270.) And it is added, "A little attention will discover to any one the truth and evidence of what is here said, and make it unnecessary to insist on any other proofs against the existence of *material substance.*" (270.)

Why is it a manifest repugnancy to conceive objects unconceived? Because by the very fact of conceiving them they are not unconceived. A conceived unconceived object is like a round not-round object, like, for example, a round square, a manifest contradiction. Therefore, for any conceived object, sensible object, or archetype, as well as feeling or memory image, to be is to be conceived, or perceived, for to Berkeley these terms are interchangeable.

Here, then, is the heart of Berkeley's attack upon matter, on which he is content to rest his case, for though he thinks there are other reasons to dispense with matter, especially since he pictures it as inert and hence useless to man and God, this argument proves it impossible and hence relieves the world of what would be useless in any case. We see now, too, why Berkeley claims that only an idea can be like an idea, for if I conceive what is like an idea, this too must be an idea, for it is conceived, and what is conceived is like what is conceived; its being is to be conceived; it is an idea. "I ask," says Berkeley, "whether those supposed *originals,* or external things, of which our ideas are the pictures or representations, be themselves perceivable or no? If they are, then *they* are ideas, and we have gained our point: but if you say they are not, I appeal to any one whether it be sense to assert a colour is like something which is invisible; hard or soft, like something which is intangible; and so of the rest." (261–262.) That is, whatever I conceive like an idea is by being conceived itself an idea, whose being it is to be conceived, or else I do not conceive it. So, whether I am a New or a Critical Realist, whether I suppose that what I perceive can itself exist unperceived, or whether I suppose that what I perceive is the image of what exists unperceived, whether I am of a vulgar or a philosophical persuasion, I contradict myself. But do I contradict myself?—that is the question. To me it seems as obvious that I do not, as to Berkeley it seemed that I do.

That I cannot conceive something which I do not conceive is of course a tautology, but from this it does not at all follow that I cannot conceive something which I suppose to exist when it is not conceived. It is one thing to conceive a tree which I do not conceive, but quite another to conceive a tree which I suppose to exist when it is not conceived. Berkeley, in not noticing the difference between these two supposed states of mind, simply fails to distinguish between the perception or conception of a thing and a belief regarding its status when I do not perceive or conceive it; he fails, in this context at least, to recognize the symbolic function that a present idea may have in indicating an absent object, although in his account of abstract ideas he does allow that one idea may stand for others like it not at present entertained by my mind.

But here, in Berkeley's position regarding the inconceivability of something unconceived, is surely a most patent semantic confusion. Because I cannot think of something which I do not think of, Berkeley concludes that I cannot think of something which may exist when it is not thought of. But actually from the fact that I now conceive it, I can draw no logical inference with respect to its status when I do not conceive it. From the fact that being now conceived it is not now unconceived, it does not at all follow that it may not exist unconceived at some other time.

Furthermore, it is not at all logically impossible that the same thing should be both in and out of the mind, present in awareness or conception and existing, even then, independently of this awareness or conception, for if I can conceive of it as existing when I do not conceive it, I can conceive of its existence when I do conceive it as not dependent upon this conception. Thus, it seems to me that the quarrel between the New and the Critical Realists, of which so much was heard when I was introduced to philosophy and so little is heard today, was, like so many family quarrels, about nothing at all, the New Realists insisting that it is the world that is the object of our awareness and the Critical Realists that it is we who are aware. In this I believe they were both right, for, surely, if I perceive or think, or am aware of anything at all, this is subjective in the sense that the thought is mine, but it may also be objective in the sense that what is thought may be the very nature of the world, or object in the world, that I suppose it to be. But while these schools were both right in what they asserted, they were both wrong in what they denied, for on the grounds of the possible objectivity of thought (which they took to be actual) the New Realists denied its subjectivity, and the Critical Realists, on the grounds of its subjectivity, denied its possible objectivity, both seeming to assume that if subjective it could not be objective, and if objective it could not be subjective, both seeming to assume that if what is thought is in my mind, it cannot be outside of it, and if it is outside of it, it cannot be within it. It is this supposedly necessary dichotomy of the subjective and objective that I deny, but, like the moderate realists of the Middle Ages, I assert that there is nothing illogical in supposing that what is *in re* can also be *post rem,* and if and when this is the case, I am aware not just of what I think (and how could I fail to be aware of this), but also, and in the same state of awareness, of what exists outside my thought.

The metaphorical manner of speaking of objects as in or out of the mind is itself deceptive, however, as though somehow at least when an object is in the mind, when I attend to it, it cannot be outside the mind, that is, cannot then be independent of the mind in its existence, in the same manner as a body cannot be both inside and outside a box at the same time, from which it would follow, for example, that the existence of my boy when of a night I tuck the covers about him, so quiet in his slumber so deep, depended at least then upon my thinking of him. But if this were the case, it would be impossible for me to think of you and not suppose you to be at least then dependent for your existence upon me. Now it is possible to think this, but I do not myself believe it, and my belief to the contrary, my belief that even now as I think of you, you are not dependent for your existence upon me, is not absurd. It would be absurd of course for me to contend that your existence now as an-object-thought-of-by-me-now does not require that I think of you now, but only in this trivial tautological sense does your existence now have any obvious necessary logical dependence upon my thinking of you now, and this trivial tautological sense of *esse* is *percipi* is the only sense that Berkeley proves.

It may be worth while to note, too, that although Berkeley applies his crucial argument for *esse* is *percipi* to ideas, he does not apply it to spirits. Let us substitute a spirit for a tree. Can we conceive, or, as Berkeley would have it, have a notion of a spirit of which no one is having any notion? Surely not, if we apply the same reasoning that Berkeley does to trees, for that would be to have a notion of what no one has a notion of, a patent contradiction. Therefore, the existence of spirits depends upon somebody's having a notion of them. This, however, Berkeley does not want to prove, and so he does not employ this argument. It would not be a valid argument concerning spirits; but then, neither is it valid concerning trees.

Is it not astounding how rationalistic the empiricists Berkeley and Hume are in their claims that the existence of body is irrational, Berkeley because the very notion of something conceived existing unconceived is irrational, and Hume for a more subtle reason? To be sure, Hume grants that there is nothing contradictory *per se* in holding that a perception or object (these terms are interchangeable with him) may exist unperceived, but he holds that when I maintain that the book I now see on my desk is the same book I glanced at five minutes ago I am maintaining a contradiction, for I am maintaining that the perception I had five minutes ago is the perception I have now, whereas obviously they are two and not one.[2] It is not my purpose here to analyze Hume's philosophy of body, but I cite this curious argument because of its similarity in general form to that of Berkeley, a supposedly logical argument of the *reductio ad absurdum* type regarding belief in body and an argument as ambiguous as that of Berkeley but for a different reason. The argument here turns on an ambiguity concerning the nature of a perception or object, which is construed both to allow existence to such an entity apart from being perceived and to deny it, so that my book as object is logically independent of my perceiving it, but as perception is not independent. The one object then is two perceptions and *vice versa,* a patent contradiction. These two empiricists, Berkeley and Hume, not only could not make intelligible the empirical world of bodies, but for different reasons they desired to make it unintelligible, the one to deny its existence and the other to prove man's natural belief in such a world one of the main illustrations of his irrationality. But is it not one of the strangest phenomena in the history of philosophy that such noted empiricists as Berkeley and Hume should turn to logic to prove the nonexistence or unintelligibility of the world of bodies?

But how did philosophic doubt concerning the knowledge of the existence of such bodies arise in the first place? Clearly from the awareness of error concerning such bodies. Thus I may take a stranger for a friend, or the image of a body in a mirror for that body, or, like Aristotle, the present appearance of a distant celestial object for the appearance of its present state, and so in these and many other ways be in error concerning bodies. From such instances of error skeptics of all times have been led to doubt the existence or the certainty of the existence of bodies. Berkeley and Hume have gone much further than this, however, for they have asserted not only that we are not certain of the existence of bodies, but that belief in such existence is unintelligible.

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[2] See Hume's *Treatise of Human Nature,* Bk. I, Pt. IV, sec. III, "Of Scepticism with Regard to the Senses."

I hope that by now I have disposed of this latter claim at least, for it is not the existence of bodies that is unintelligible, but the arguments advanced by Berkeley and Hume when taken to prove this conclusion. Nor is it possible that anyone can prove the unintelligibility of the existence of bodies, for that something should exist the essence of which is not to be perceived, such as the table I am writing upon, is perfectly intelligible, and I do now so define this object and so conceive it.

I am not so foolish, however, as to suppose that by definition I secure the existence of such an object. At this point I am only maintaining that the existence of such an object is not unintelligible. And understand that I am not here concerned at all with the question of the causal status of such an object, but only with its essence, with its definition, which does not include its being thought of by me or by anyone.

The causal status of such an object is another matter entirely. Thus, I hold that such an object, being contingent, does depend upon a necessary being who eternally thinks it but who and whose thinking of it are other than it; but this is not at all to say that its essence is to be perceived, which is what Berkeley maintains. And here let me observe that, to be consistent with his own reasoning, Berkeley should have maintained not only that to be is to be perceived but that to be is to be perceived by me. He should have concluded that I cannot think of a body whose existence does not depend upon *my* thinking of it. In other words, if his argument proved the dependence of what is thought of on its being thought of, it would prove the dependence of what is thought of on my thinking of it, for *I* can only think of something that *I* think of. Thus, Berkeley's argument is not only faulty logically but if it were not faulty would prove what Berkeley does not want to accept, namely, the dependence of body on whoever thinks of it. Berkeley, however, is content to accept only part of this conclusion, the dependence of body on its being thought. Observe, however, that he does not argue that because of the nature of body there is a causal dependence of body upon a being who thinks, creates, and sustains it, but that the essence or nature of body is to be thought. His argument is not a causal argument concerning the causal conditions of the existence of body, but an argument concerning the nature or essence of body. All I have sought to maintain is that this argument does not prove the unintelligibility of the existence of something thought of, the essence of which is not to be perceived, namely, body. What the causal conditions of the existence of such a body are is another question entirely. Berkeley's failure to distinguish these two questions of essence and existence is just another indication of his confusion of mind.

But in order that I not confuse these two questions, let me observe that the intelligibility of the existence of body does not guarantee its actuality. So let us return to this question. And here I would note, as I have already noted, that skepticism about the actuality of body was not in the first place grounded upon the supposed unintelligibility of body, but upon the reality in specific instances of error concerning body. But I fail to see how the existence of such error can impugn the reality of body or the knowledge thereof, any more than an error in arithmetical calculation can impugn the reality of a correct calculation and of the knowledge thereof. Hume, to be sure, and Descartes too with his demon hypothesis, extended skepticism to matters of reason as well as matters of fact, and in this they were consistent, for there is just as much reason, namely, none at all, to doubt on the grounds of human fallibility the reality and knowledge of matters of reason as the reality and knowledge of matters of fact. The fact that I may add a column of figures incorrectly does not imply that there is no correct addition of the column or that I may not know this, and likewise the fact that I may be mistaken in many an inference concerning material reality does not at all imply that there is no such reality or that I may not know what it is. To be sure, if when adding a column of figures I get two different results on two separate additions, I do not thereby know that one addition is correct and the other not, for both might be incorrect, but there is a correct answer and there are ways of determining it. Likewise, concerning the material world, conflicting views or perceptions do not prove one or the other view or perception correct, for they may both be wrong; but once again there is a correct view, and often enough we can come to know this, and even when we do not discover it we can intelligently search for it. Thus, neither is the reality of matter unintelligible nor do skeptical arguments require that we deny its existence. To be sure, the knowledge of how and when material things exist and what their properties are is for us an empirical question, for their existence is not logically necessary, and even if it were logically necessary, as is the correct addition of a column of figures, we are not infallible, so that in this field of inquiry, although we can know much, there will always be much error and much to learn.

However, the course of such inquiry must be kept as far removed as possible from gratuitous epistemological assumptions. From the fact that my toothache does not exist when I do not feel it, it does not follow that it has only a mental existence, for it is in my body as well. I am mindful, of course, of the instance cited by Descartes of pain referred to an amputated foot. To be sure, such pain is not in a foot that does not exist, but it does not follow that it has no physical locus. It does, and that in the body of the man suffering the pain; he is simply mistaken concerning the extent of his body. Nor do I mean to imply that a referred pain is not in the part of the body to which it is referred, but only that it is in the body suffering the pain, for that is where we locate pain. Of course, I am referring to what are properly called physical pains, not feelings such as sorrow or melancholy which, though often conditioned by bodily states and associated with them, are not properly bodily at all but mental only. That is, whereas in one sense they are located, in that they are mine, and I, having a body, dwell in a world of bodies, in the sense I am here concerned with they are not located at all since they have in themselves no physical status. It is the same with a physical pain as with a physical quantity, both of which under certain physical conditions have certain physical loci.

But, you may say, the pain exists only when I perceive it and the quantity not, so that the former is only mental and the latter physical. Now the point I would observe is that, supposing the pain to exist only when I perceive it, this does not of itself prevent its being physical, and if it has a physical locus it is physical, even though existing only when it is perceived. Supposing it, then, to have a physical locus, the determination of whether it exists only when it is perceived is, I submit, an empirical question. If I never perceived my body without perceiving it to suffer pain, I might well consider pain to be an essential property of it, but as it is, I perceive it now to suffer in some part or other and now not. I perceive the pain to come and go while the quantity remains the same, or seems to remain the same. From this I conclude not that the pain is not physical, but that its physical existence is confined to the time of my perception of it and so is different temporally from the physical existence of the quantity of my body. In other words, it is not because when I go to sleep both the pain in my body and the quantity of my body vanish from my mind that I conclude the pain exists only when I perceive it and the quantity not, but because I perceive the quantity without the pain and the pain only intermittently with the quantity, for though I may go to bed with a headache I do not always wake with one, but I do always wake with a head.

If it be claimed that this is not an empirical question at all because it is absurd to suppose a pain unperceived, let us recall the following statement from Berkeley: "There was an odour, that is, it was smelt; there was a sound, that is, it was heard; a colour or figure, and it was perceived by sight or touch. This is all that I can understand by these and the like expressions." (259.) And let us recall that the reason for Berkeley's confident statement on this point is his conviction that it is logically absurd for anything perceived to exist unperceived, which conviction I hope I have shown to be ill grounded. For my part, I am willing to grant that no matter how strange it may seem to suppose a pain unperceived, such a condition is logically possible, and sometimes, like Leibniz, I think it may exist in some of the lower animals who react as though they felt pain but perhaps do not feel it, or again in human beings in a state of general anesthesia who, while they may give many indications of suffering, may be totally unconscious. Of course, a semantic question is involved if we insist that we do not speak of a state as painful if we are not conscious of it, but if we were all convinced followers of Berkeley we might insist on not calling something figured if we were not conscious of the figure. But what things are or are not is surely not determined by how we choose to speak.

The point I would insist upon is that even when I have good empirical evidence that certain objects of perception, such as pains, exist only when they are perceived, this is not because I do not perceive them when I do not perceive them, for then quantity too would exist only when it is perceived, but because the manner of their perception is such as to lead me to this conclusion empirically.

However, some questions concerning the conditions of the existence of certain objects of perception that may at first sight seem to be empirical turn out in the long run not to be so. Take, for example, the fact that objects are colorless in the dark. I may come to this conclusion by correlating the absence of light with the absence of color and only later may I come to realize that color is a kind of light, so that what appeared to be an empirical correlation is a matter of identity and not properly correlation at all. But is the correlation of the absence of color with the absence of sight to be explained in a like manner? Is the being of color to be perceived? What, then, of quantity? What, then, of all that is perceived? But, as we have seen, no identity of the being of what is perceived with being perceived can be established logically. However, the apparent correlation of the absence of what is perceived with the absence of perception is a matter nevertheless of identity and not correlation, for it is simply the condition of something not being perceived when it is not perceived.

But what of light and color? What of their status when not perceived? Much of the relativity I know about light and color is physical relativity. Because I cannot see through a stone wall, I do not conclude that there is nothing on the other side of the wall, and because I cannot see the colors of the spectrum in the mist before me except where the rainbow appears, I do not conclude they are not elsewhere to be found, for I have only to move and the rainbow apparently moves with me. The rainbow does not really move, however, for the rainbow I have seen I am no longer in a position to see and the one I come to see I was not in a position formerly to see, which is why I can never reach the end of the rainbow and so find the crock of gold, for when I approach this elusive object of my vision I can no longer see it. But they are the same drops of water that cool my face as I move through them, and refract and reflect the light of the sun to my eye when they are seen in proper perspective.

Relativity of perception, in the sense that only under certain conditions certain things are perceived, does not of itself prove that these things do not exist when they are not perceived. A universal condition of things being perceived is that we be conscious, but it does not at all follow that if we are unconscious nothing exists. Of course, I do not deny that there are psychological as well as physical determinants of perception and that in any given instance of perception it is a debatable question whether the nature of what is perceived exists likewise unperceived. I repeat that the determination of the conditions of the existence of what we perceive is an empirical matter which only a close empirical study can further; it is not a matter that any Lockeian or Berkeleian dogma can settle. Because the physicists of the seventeenth century were primarily interested in quantity, it does not follow that only the primary qualities are physical and the secondary qualities mental, following Galileo, Descartes, and Locke; or because both sets of qualities are relative and of course perceived, it does not follow that their being is to be perceived, following Berkeley.

However, until we slough off the dogmas of the empiricists and cease to confine our interest in things material to quantity, we are not likely to make much progress in this field of inquiry. Bishop Berkeley was as little inclined as I am to regard the world of the quantitative physicist as the last word on the nature of things; indeed, he was so little inclined to do this that he did not want to give the physicist his due. To save the rich and variegated world of the senses he would destroy the world of matter, but he did not realize that the material world before which our ancient and medieval forebears stood in proper awe is substantial in its own being and is endowed with riches far exceeding what even their fertile imagination attributed to it by that Love which "moves the sun and the other stars."

BISHOP BERKELEY ON EXISTENCE IN THE MIND

KARL ASCHENBRENNER

> Nec Deus intersit, nisi
> dignus vindice nodus
> Inciderit . . .
>
> HORACE

QUESTIONS about Berkeley's doctrine of mind are not about incidental matters, but about what lies at the heart of his philosophy. They concern not so much a philosophy about the mind as a philosophy of mind, a philosophy in which mind occupies a position which it enjoys in scarcely any other system of thought. We shall, however, be concerned very little with his views about the nature of the mind itself. Rather we shall consider his use of the phrases "in the mind" and "without the mind" and see whether we can agree that "the choir of heaven and furniture of the earth, in a word all those bodies which compose the mighty frame of the world, have not any subsistence without a mind."[1] We shall seek to evaluate this conclusion and his method of arriving at it.

COMMON SENSE AND COMMON IDIOM

The phrase "in the mind" is a crucial predicate in Berkeley's system. He means to tell us that certain things are in the mind and not apparently where, or as, most of us had supposed them to be. He intends quite plainly to say that such things as dogs, chairs, and trees are in the mind. This sounds strange to common sense. A boy does not think of his dog as being in his mind. If a philosopher were to suggest this to him, the boy might, after looking him over very thoughtfully, answer "Oh, no!" and then go on to tell him the dog was in the house. It is something of a shock even to suppose two such individuals conversing about this, but it is only in some such way that we can grasp the challenge of Berkeley's views to accepted modes of thought. When a philosopher professes to put dogs and chairs into the mind, just what is his relation to popular opinion? Is he controverting it? Here we must distinguish questions of meaning from questions of fact. A philosopher who thinks that the dog is in the mind ought to know whether he is (*a*) correcting people in point of fact, or (*b*) talking about a fact that is inaccessible to or remote from common sense, or (*c*) using different language or terminology to describe some familiar fact.

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[1] Berkeley, *A Treatise concerning the Principles of Human Knowledge* (hereafter referred to as *Pr.*, with section number), in Berkeley's *Works*, ed. A. C. Fraser (Oxford: Clarendon Press, 1901), Vol. I; sec. 6.

Now Berkeley would not say that he had corrected or contradicted the boy, as in (*a*) above, if he had told him that the dog was in his mind. In fact he makes more than a few gestures toward comforting people about such things. In such a situation he would advise the boy to go on speaking of the dog in customary fashion. But why? It is because saying that the dog is in the mind is not contrary to a verifiable familiar fact, but is a more apt description of a familiar fact: perceiving the dog. It is more apt because of additional information about the situation which the philosopher possesses and the boy does not. His answer thus combines aspects of (*b*) and (*c*). People are safe from philosophic criticism only because they are unaware of all the relevant facts and have no speculative opinions on such matters: "In the ordinary affairs of life, any phrases may be retained, so long as they excite in us proper sentiments, or dispositions to act in such a manner as is necessary for our well-being, how false soever they may be if taken in a strict and speculative sense."[2] In general the vulgar opinion is safe when taken *in its own terms*. There is also, however, a danger to common opinion: the attraction of a false metaphysic.

Berkeley says repeatedly that he is addressing himself to philosophical questions and that he wants only to dispose of a philosophical notion, namely, matter. Now the vulgar as well as the learned use the term "matter." Although Berkeley concedes that this is in principle harmless, the vulgar may also come to believe certain metaphysical propositions about matter or a "substratum."[3] These propositions of materialism and their vulgar echoes Berkeley regards as either unfounded, or void of significance, or self-contradictory. Thus he is inclined to be tolerant toward the vulgar use of the word "matter," but also to view it with suspicion. Sometimes his tolerance gives way to the direct accusation that "the common current acceptation of the word [signifies] an extended, solid, moveable, unthinking, inactive Substance."[4] His point clearly is to warn against the acceptance of a materialistic metaphysic wherever it may appear, amongst the learned or the vulgar.

Apart from this, his views about the language and opinions of the vulgar majority are moderate and conciliatory. In his own words, "common language ... is framed by, and for the use of the vulgar."[5] "If ... you agree with me that we eat and drink and are clad with the immediate objects of sense, which cannot exist unperceived or without the mind, I shall readily grant it is more proper or conformable to custom that they should be called *things* rather than *ideas*."[6] "If the word *substance* be taken in the vulgar sense ... this we cannot be accused of taking away."[7] "That the things I see with my eyes and touch with my hands do exist, really exist, I make not the least question."[8] He does, however, regard the term "idea" preferable to "thing."[9] This preference is not for a mere linguistic change: it is a linguistic change based upon the proposition that things *are* ideas, or assemblages of ideas. He does not commit himself solely to (*c*) above, but to (*c*) as a consequence of his embracing (*b*). This part of his views is the one that will most disturb common sense. Berkeley thinks that such anxiety is groundless, for he affirms the reality of the perceived world again and again.

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[2] *Pr.*, 52.

[3] *Pr.*, 54, 73.

[4] *Three Dialogues between Hylas and Philonous*, in Berkeley's *Works*, Fraser ed. (as cited above), Vol. I, p. 429. References to these dialogues, below, are to this edition and volume.

If these doctrines are nevertheless said to *appear* to negate the reality of the perceived world and thus to give as much offense as the skeptics do, Berkeley is always ready to accept the challenge.[10] He replies that of all systems his alone best defends and preserves the reality of the perceived world. For on his view what is perceived is not an appearance distinct from reality, or a representation of reality: what is perceived, and that alone, *is* reality. Again, he does not at all dispute the fact that "real things" are very different from imaginary things, or "chimeras;" that "there is a *rerum natura,* and the distinction between realities and chimeras retains its full force."[11] He believes that distinctions between the true and the false, the real and the unreal, can be made altogether *within* the orbit of ideas. The speculations of the materialists (the true skeptics, Berkeley thinks) regarding the necessity of perduring matter lying beyond ideas are nothing but hypothesis and entirely dispensable. There is nothing in immediate experience which compels us to believe in "matter" (though there is something in it which entails the existence of minds). Ordinary people may talk and even act *as if* their sensations were caused by "some senseless unthinking being," but no one can "clearly apprehend any meaning marked by those words, and form thereof a settled *speculative* opinion."[12] Learned notions such as the metaphysics of materialism may have sifted down to the vulgar, but no opinions on such matters are needful to them. Berkeley would not, with Hume, regard fallacious, fictitious beliefs in matter as normal, natural, and necessary for carrying on the business of life.[13] Rather, if the truth about perception were once made clear, complete harmony could prevail between the learned and the vulgar. In the oft-quoted maxim, we need to "think with the learned, and speak with the vulgar."[14]

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[5] Fraser ed., Vol. I, p. 392.

[6] *Pr.*, 38.

[7] *Pr.*, 37.

[8] *Pr.*, 35.

[9] *Pr.*, 39.

[10] *Pr.*, 86–90, and *Philosophical Commentaries, Generally Called the Commonplace Book*, ed. A. A. Luce (London: Nelson, 1944), entry 79 (according to Luce's numeration, which will be observed hereafter).

[11] *Pr.*, 34.

As we have noted, one reform of thought that Berkeley calls for demands that we take things as ideas (for things are said to be assemblages of ideas) and that we substitute the term "idea" for "thing." He recognizes that there is a certain danger in this since the term "idea" has already an antecedent vulgar use and we must be careful to separate that use from the philosophic use of the term, else we run the danger of making chimeras of real things. "Idea" may commonly mean an imaginary thing, or what is merely thought of, or possible, but not yet actual: a plan, guess, hope, a passing thought, a recollection, etc. In this sense a building built is not an idea. But in Berkeley's sense even a building built is an idea or set of ideas. What is essential in his use of the term is that an idea is *in the mind.* The argument will seek to show that a building built and other such perceptible things are ideas and therefore in the mind. Let it be noted again that this is not just a matter of redefinition. Evidence will be produced to support it as a fact.

So far we have seen that Berkeley does not wish to controvert the tenets of common sense. What is claimed as knowledge or reliable procedure, vulgar or scientific, about material bodies is said to be unassailed. Common sense distinguishes between real and imaginary dollars, and as long as a philosophic tenet does not obliterate or conflict with this distinction the tenet is safe from that quarter. Common sense does not like to have its leg pulled by being told that we have sticks and stones in our heads. But if it is assured that such is not the intent, nor is the intent to confuse real and imaginary dollars, then, Berkeley hopes, it will take no offense. Those very things which common sense declares real are likewise regarded as real by Berkeley. Yet they are regarded as ideas. This is the source of his Janus-faced attitude toward common sense and philosophy, as Mr. Sullivan described it.[15] Berkeley intended no deception, of course. He thought he had the key to peace with common sense without violating his learned convictions. Indeed, it is the very mark of empiricist philosophers to be rather ardently concerned about peace in that quarter. When Berkeley undertakes to "explain reality" he gives a philosophical account which draws the line between reality and illusion exactly where common sense draws it, or at least he thinks he has a place for this very necessary distinction in his system.[16] The regular objects of ordinary perception are real, not, as for Plato, only apparent. Only the ideas which are excited at our pleasure are unreal. The philosopher is henceforth to face either toward philosophy or toward common sense and contemplate truths which, being truths, are compatible with each other. Berkeley's technical opinions are, on the whole, meant to controvert not the vulgar but only the technical opinions of other metaphysicians, those who believe in matter as substance.

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[12] *Pr.*, 54. Italics mine.
[13] Hume, *A Treatise of Human Nature,* Bk. I, Pt. IV, secs. I and II.
[14] *Pr.*, 51.

With the aid of these distinctions and definitions Berkeley comes to the conclusion that the world has no subsistence "without the mind," and he does not regard himself as a mere paradoxer in doing so. If he is not urging a mere trivial reform of language, substituting "idea" for "thing," his solution of various philosophic problems must go back to some asserted *fact* to which he draws our attention and on which as premise all he says depends. This premise is that things are ideas and nothing but ideas. This is that "speculative" fact of which he speaks, and which is not noticed by the vulgar. It is the fruit of philosophic investigation. Many pages in Berkeley are given over to laborious analysis of experience in order to convince us of it. In due course we shall inquire into the cogency of this premise. It is in fact a premise that other "empiricists" besides Berkeley agree to. Perhaps only Berkeley ever saw its consequences through to the end and had the courage to embrace them without hesitation. He was fortified in his resoluteness to pursue this course by his reliance upon God: God as a necessary part of his scheme of explanation, to say nothing of God as a power who comforts the man of faith.

IDEAS AND SENSE DATA

In the program which Berkeley undertakes, ideas in perception are generally similar to what have since come to be called "sense data," and perhaps also to what are called "sensibilia." This may seem obvious since

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[15] Cf. Mr. Sullivan's essay in this volume.

[16] *Pr.*, 34–36.

Berkeley makes extensive use of arguments from illusion, familiar before and since his time, and the purport of these arguments has sometimes, though not always, been to show that things are assemblages of mind-dependent sense qualities. We shall nevertheless digress here in order to show that we are justified in speaking of sense data in connection with Berkeley's philosophy and because we shall find here a most important detail which tests the strength of his treaty of peace with common sense.

There are two qualifications which must be made. First, in speaking of sense data in this connection we are merely engaged in justifying the use of the term "sense data" in its modern meaning to restate part of Berkeley's views. We are not endorsing Berkeley's contention that physical objects as we ordinarily apprehend them *are* collections of sensibles or, as he says, ideas.

Second, some older modern doctrines employ the notion of sense data only in conjunction with that of physical objects. In a representative or a causal theory of perception, both sense data and physical objects would be said to exist. Berkeley's view is of course not at all like this. He repudiates every form of the view that there are material objects distinct from what we would call "sense data." What he regards as admissible is only the use of common-sense language about such objects, with the professional reservation that what is true and expressed in such language can always be better stated in terms of "ideas." Ideas generically include all the entities that would later come to be called "sense data," "sensa," "sensibles," "sensibilia," and of course a good deal else besides, such as creatures of the imagination. If we use such an expression as "sense data" as synonymous with "ideas" in Berkeley, we must do so only on condition that sense data be taken as terminal, as not pointing ahead, as it were, toward so-called physical objects distinct from them.

We may note briefly how Berkeley presents the facts about perception. Of the many places in which he does this, we may consider the Third Dialogue. Here Hylas accuses Philonous of leaving us "nothing but the empty forms of things, the outside only which strikes the senses." Far from repudiating this, Philonous says that what Hylas calls "empty forms" are indeed "the very things themselves."[17] This amounts to direct realism and is so intended.[18] Ideas are distinct from one another and vary continually as they arise and perish. According to any sense-datum theory such continually variant items are present in perception as we, for example, walk around a chair or a house, and of course something changes, quite apart from any *theory* of epistemology. There are, as we have noted, sense-datum theories which are not "universalistic" and "reductionistic," theories which tolerate the existence of "physical objects" and say that sense data are sometimes their surfaces. But Berkeley's theory is not one of these. Berkeley identifies variant sense data or sensibles with objects themselves. Whatever objects there are, they *are* sensibles. Apart from ideas there exist no objects: there is only a vocabulary involving such terms as "object," "thing," etc.

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[17] Fraser ed., Vol. I, p. 463.

[18] Cf. Mr. Popkin's essay in this volume.

But on such a view does not a book vanish into a manifold of bookish sense data? Can we really, without offending that common-sense view which Berkeley is determined to respect, regard statements about physical things as merely briefer expressions for long catalogues of statements about ideas? Do we not commonly suppose that *something* is red or heavy or smooth or ten feet long? Let us consider the issue of the numerical distinctness of ideas or sensibles in the very important situation where someone says that he both sees and touches an *identical* object. Is it false to make such a claim? Philonous in this kind of situation speaks as a technical expert. His analysis begins with the significant phrase "strictly speaking," and then, as in the *New Theory of Vision,* we are told that what we see and what we feel are two different objects: there is no x such that I see x and I feel x.[19] Why? Because if x is seen, and red in color, it is inconceivable that I should feel just that very x, for color cannot be felt; nor, again, can a gritty surface be seen, or so it would be argued.[20] There are, then, at least two objects, both real. The possibilities are either to admit the existence of physical objects and say that some sensibles are peculiarly related to them as their true surfaces or colors, or to declare that every sensible is itself an object, though not a "physical" one, as some say, and to take care of truth and error independently. Berkeley chooses the latter, thinking that everything that anyone will try to say of a so-called "physical object" will turn out to be a description of sensibles anyhow.

But the matter cannot be left there. Something like the following objection is bound to arise. Sometimes common sense wants to say that *what* it saw it *also* felt, and if this is going to be declared to be, "strictly speaking," false (as by Philonous above), it will want to know why. For

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[19] Fraser ed., Vol. I, p. 463. Cf. also *A New Theory of Vision,* entries 121–146.

[20] *A New Theory of Vision,* entry 135.

"What I saw I also felt" (or, concretely, "I saw and felt a book") is a sentence of common sense, not of metaphysics. It is therefore incumbent on Berkeley, by his own avowed program, not to deny it, as Philonous apparently has just done, but to translate it into the language of sensibles. It is not enough, the objection continues, to say that seeing is not feeling or that a color cannot be touched, for common sense never denies this. What common sense holds is that here and now I *do* see what I feel and this cannot be true if the what is only a sense datum and thus restricted to one and only one sense modality. What common sense is saying is that the situation where I see what I feel is *not* that other very real situation where I see one thing and feel another, as one feels a chair under him while looking at the fire. It knows of no other way to interpret the denial of "What I saw I also felt" or "I see what I touch." Berkeley, the objection continues further, does not content himself with saying merely that there is a content for seeing and a content for feeling and that these are very different. This might have fairly safely identified what are now called sense data. He goes much farther than this. He construes the outcome of the famous "experiment" with Molyneux's blindman in such a way that it must always be false to say, "I see what I touch."[21] Common sense will balk at this. It can doubtless be taught about ideas and sense data, but even after it learns all this it may still say, "I see what I touch."

Without inquiring precisely how or whether Berkeley could answer such an objection, it is fairly clear that his resources for answering it would include the following points: (1) he could say that he is offering a technical opinion about a matter which is not under the survey of common sense and therefore not necessarily incompatible with what common sense finds true; (2) he could appeal to the doctrine of the association of ideas, or, better, to his own doctrine of natural signs, which is intended to provide an adequate analysis of certain propositions of common sense which are in fact true: the same-object-for-sight-and-feeling of common sense is to be construed as simply a regular concomitance or sequence of ideas or sensibles.

Whatever one may make of these resources (at least the first of these will be challenged below), adequate grounds have now been cited for interpreting Berkeley's doctrine of ideas in terms of sense data, taken independently of any concept of physical objects. The admissibility of this interpretation of Berkeley must, as we said, be distinguished from the admissibility of the identification itself of sensible things with sense data, sensa, sensibles, or ideas, or the general identification of whatever exists, besides mind, with ideas. We shall later observe the consequences of such identification.

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[21] *Ibid.*, entry 136. Cf. also Locke, *An Essay concerning Human Understanding*, Bk. II, chap. ix, par. 8.

ON "BEING IN THE MIND"

We may now consider questions about the critical notion of "being in the mind." Let us first consider some further matters that arise from Berkeley's well-known doctrine of vision. In his reconstruction, as we might call it, of the objects of perception, Berkeley claims to be able to furnish information about them which is not available to common sense and which is decisive, he thinks, of the issue of their *materiality*. In the *New Theory of Vision* he aims to show just how the sense of visual distance is generated.[22] Common sense, he finds, experiences a sense of "outness" in the visual apprehension of objects. This outness he regards as an interpretation of, and inference upon, experience. It could provide a stubborn, though, as Berkeley sees it, perverse obstacle to the acceptance of the view that visual objects are in the mind, for our common-sense habits are very strong. But we must rise above common sense, Berkeley thinks: there are facts not known to common sense, and the scientific facts about vision are as he has sought to present them in the *New Theory*. Common sense tends to think of minds as reaching out, as it were, toward objects "external to" the mind. According to Berkeley, the facts are rather that the complex of visual data is something like a patterned screen containing cues for determining what kinds of tactual experiences we might come to have. Thus by arguing that "outward objects" are not really outward, that distance from the body is not conveyed to us by vision, the most powerful of our senses, our objection to accepting the thesis that "outward objects" are in the mind is to be disarmed. Is this more than a rhetorical stratagem, a roundabout and irrelevant though clever way to conquer our common-sense objections to the doctrine that objects are in the mind? It is almost as if Berkeley were arguing that objects are, so to speak, closer to us than we think. Of course this would constitute no sort of evidence for their being "in the mind." Berkeley would probably concede this. But even if the argument is beside the point and even if the whole argument of the *New Theory* is invalid, the "in the mind" doctrine as developed in the *Principles* could proceed unretarded.[23] There are other proofs available, Berkeley thinks, and he says that he could, if he had chosen, have argued in the *New Theory* that even tangible objects are in the mind. He also takes note of the fact that there is a sense of distance in dreams and yet no one supposes that dream objects exist anywhere except in the mind.[24]

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[22] *A New Theory of Vision*, entries 2–51.

[23] *Pr.*, 44.

The force of what is allegedly demonstrated in the *New Theory* is, then, to remove an objection which common sense might feel to be overwhelmingly contrary to the thesis that perceptual objects are in the mind. If common sense has been corrected here, it is by way of an appeal to certain alleged psychological, scientific, facts to which common sense has, in a sense, no immediate access. Since, as we have already shown, Berkeley believes himself to be in harmony with common sense, the thesis of the *New Theory* is a rather critical test of this harmony. It is plain that our sense of things being "out there" is a powerful intuitive, initial restraint on the acceptance of Berkeley's philosophical thesis. In spite of the fact that philosophers may demand that "in the mind" or "without the mind" never be taken spatially, there may be something that yet seems intuitively intolerable in these concepts as applied to physical things. In fairness to Berkeley it should be observed that there could be no science at all if we were always to be restrained from saying that the world is indeed really very different from the way we ordinarily suppose it to be.

Let us consider now the explicit meaning Berkeley attaches to the statement that things are in the mind. We can determine this from the definitions he gives and from amplifying phrases regarding critical terms as well as from the comparison of use in various contexts.

Whenever Berkeley speaks of perception in its strict sense, he is speaking of a relation of the mind to what common sense calls "things" or "objects." These things, he holds, are orderly assemblages or sequences of sensibles united by association. Common sense refers to them by ordinary substantive nouns, such as "dog" or "tree." They have somehow upon them the mark of an order and regularity that is beyond our power to alter. (It is not clear how Berkeley knows that he himself does not determine this order as he does that of his mere imaginings, nor how, on the other hand, he knows that he is determining the order of the latter. He simply takes it as a plain fact that this is so.) The stability of such objects does not derive from the underlying existence of matter, but from a causal order divinely ordained. Sensibles in the sense-perceived world have actually a kind of double allegiance: on the one hand their being depends on or is in fact identical with the perceiving of finite observers, and on the other they are caused by God. But Berkeley does not think that human minds create their sensibles. This point has often been misunderstood in such a way that it is supposed that according to Berkeley the mind creates the external world. But this is an error, for although things or ideas are in the mind, the mind itself is a substance distinct from all that is perceived or imagined. The mind is active, he holds, but as a percipient and not as a producer, especially not in perceiving the external world whose producer is God himself.

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[24] *Pr.*, 42.

The phrase "in the mind" occurs dozens of times in the *Principles.* When Berkeley is talking about various "sensible things" being in the mind, he repeatedly adds in an amplifying phrase that they are being perceived. On many occasions he will write something like "without the mind or unperceived."[25] Similarly, at the beginning of the *Principles* he tells us that what he calls "mind, spirit, soul, or myself" is "a perceiving active being," and that this being, although "entirely distinct" from ideas, is something "wherein they exist, *or, which is the same thing,* whereby they are perceived."[26] Such amplification recurs many times.

Still another explication of the meaning of "in the mind" is given in his treatment of the fifth objection. It may be objected that "if extension and figure exist only in the mind, it follows that the mind is extended and figured." The objector may seek to support his argument by stating that "extension is a mode or attribute which is predicated of that subject in which it exists." Berkeley answers: "Those qualities are in the mind only as they are perceived by it;—that is, not by way of *mode* or *attribute,* but only by way of *idea.* And it no more follows the soul or mind is extended, because extension exists in it alone, than it does that it is red or blue, because those colours are on all hands acknowledged to exist in it, and nowhere else."[27] The essence of this is that sensible things as such are in the mind in the sense in which the secondary qualities are in the mind. Since Berkeley expresses no dissatisfaction with Locke on the latter point (though there are other sources of difference between them about qualities), we may assume that he is here agreeing with Locke but then adding, contrary to Locke, that whatever is true of the secondary qualities (that they exist only in the mind or so far as they are perceived) is likewise true of the primary qualities. When Berkeley says that extension is in the mind alone, he means that extension is an idea, and an idea is always related to a mind as an object of its awareness. This is to say just what he has said elsewhere in the amplifying phrases.

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[25] Cf. *Pr.,* 9, 18, 22, 56, 87.

[26] *Pr.,* 2. Italics mine.

[27] *Pr.,* 49.

These efforts to illuminate so critical a phrase as "in the mind" by relating it to "perceived by the mind" are inadequate unless we obtain an explication of both phrases. In fact the second may need it the more of the two. We want to know what alternative Berkeley is offering to other theories of perception, for example, the theory that in perception the mind attends to the object via some intermediate entity which is in the mind. Actually we are not given a satisfactory answer to this question. What is offered in Berkeley's special alternative is that what the mind is related to in perception is not in a sense an "object" at all; it is an idea and can be nothing but an idea. It is from this that he takes the step to his most celebrated doctrine, that to be is to be perceived.

THE "ESSE" OF SENSIBLE THINGS IS "PERCIPI"

Three principal propositions taken together constitute Berkeley's argument. They may be stated as follows:

A) Sensible things are ideas (or combinations of ideas).
B) Ideas exist only in minds.
C) Sensible things exist only in minds.

Since the phrase "existing in the mind" means for him nothing more than "being perceived by the mind," as already shown, *C* is no other than the doctrine that to be is to be perceived, restricted to sensible things. The three propositions obviously constitute a valid syllogism. We shall question the conclusion and therefore either the first or the second of the premises. Of these Berkeley seems to regard *A* as analytic, as indeed he regards all three propositions at one time or another. Our reasons for rejecting *A* will be given mainly in the section "The Arrow of Intent Deflected," further on. Berkeley lays most stress on *C*, the "*esse* is *percipi*" doctrine. "The table . . . exists; that is, I see and feel it."[28] "As to what is said of the *absolute* existence of unthinking things, without any relation to their being perceived, that is to me perfectly unintelligible. Their *esse* is *percipi*."[29] The being, existence, or reality of sensible things is and can be nothing more than their being perceived, or, to put it still more briefly, every sensible thing is perceived. The denial of "*esse* is *percipi*" (or similar statements) is taken to be self-contradictory. "This tulip may exist independent of your mind or mine; but, that any immediate object of the senses—that is, any idea, or combination of ideas—should exist in an unthinking substance, or exterior to *all* minds, is in itself an evident contradiction."[30] The vulgar opinion, we are also told, involves a contradiction.[31] In other words, "*esse* is *percipi*" is said to be analytic. In fact this statement about the tulip indicates that *B* (ideas can exist only in minds) is also analytic.

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[28] *Pr.*, 3.

[29] *Pr.*, 3. This is the only occurrence of this celebrated phrase, using the two Latin terms, in Berkeley's principal works.

As to *C*, can we not ask whether its contradictory is conceivable? It could also be regarded as saying that whatever exists is perceived. This does not seem difficult at all to deny without self-contradiction. In any case, *C* does not seem to be trivially true. What about the premise *A?* This would certainly be trivial if by "sensible thing" one already meant something unquestionably mental in a very restricted sense, such as fantasies or memory images. But Berkeley goes much farther than this. Sensible things are the so-called physical things that common sense and science talk about. But what the philosopher is in a position to say about such things, according to Berkeley, is that though they are physical or material (if we insist on speaking that way), they are combinations or assemblages of ideas or sense data. This is that subject, referred to above, on which common sense has no "speculative" (that is, philosophical or scientific or technical) opinion. The whole force of the argument rests on *A*, this "speculative" fact, that things are assemblages of ideas. This is especially important if we are unwilling to grant that *C* is somehow self-evident.

It is perhaps worth while to mention one qualification to the "*esse* is *percipi*" doctrine, namely, that minds or spirits themselves do not owe their existence to being perceived. Finite minds are indeed dependent, but not upon being perceived. What the doctrine is meant to cover is obviously everything that common sense designates "things" and certainly everything that the philosophers call "ideas," that is, sensibles. Perceivers and perceptions exhaust the universe.

Proposition *B* states that ideas exist only in minds. We have already shown that this is for Berkeley synonymous with saying that ideas are always perceived. Is it then true, as he is now shown to maintain, that it is self-contradictory to say that ideas can exist unperceived? Of course he readily agrees that they may exist unperceived by him. This saves him from avowed solipsism. As we shall see, he also agrees that there exist or have existed things unperceived by any human mind, such as the earth in the early stages of creation. These things are assemblages of ideas, and he not only believes that such ideas have existed apart from any sort of perception any human being could devote to them, but he everywhere shows that he thinks this far easier to believe than that *physical things* existed. But he thinks it actually self-contradictory to suppose that they were not perceived *at all.* To this we must respond with two questions: Is it in fact self-contradictory so to suppose? Is there any evidence at all to support the belief that ideas do or do not exist unperceived?

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[30] Fraser ed., Vol. I, p. 406.

[31] *Pr.*, 4.

In respect to the first question, we may notice that Locke apparently never regarded it as a self-contradiction to take the secondary qualities as existing independently of the mind. These may safely be regarded, for our purposes, as sense data, and Locke takes it to be true simply as a matter of fact, but apparently not necessarily true, that they are dependent on the mind. But Berkeley thinks otherwise. An idea out of mind is an absurdity. Of course we may be inclined to say that unperceived sense data amount to unperceived perceptions, and this is to take them as Berkeley hopes we will. In that case, *B* is necessarily *but only trivially* true.

If, on the contrary, it is entirely possible to conceive sense data to exist unperceived, then if *B* is true at all it is yet not necessarily true. It is not necessary to commit oneself about this question, nor perhaps worth while to take time to challenge *B* at all since the main issue is over *A*. But we need to raise some doubts about *B,* nevertheless, since it is involved in the question of the truth of common-sense beliefs, for example about the processes of nature which we do not happen to observe. We ask, then, whether *B* is true as a matter of fact and whether, in the terms of the second question just raised, there is any evidence to decide the question of the existence of ideas unperceived. Here we would seem to be asking about an idea of an idea, a sense datum of a sense datum. But surely this is absurd. We should be treating a sense datum like a "substratum." There may be other reasons for saying that we have no evidence for the existence of unperceived sense data. All this seems to favor Berkeley's position, and we shall leave matters at saying that we have no such evidence.

The critical irony of this situation is that Berkeley desperately needs to have the second question answered *affirmatively.* For if he does not have any evidence of the existence of unperceived sensa, he cannot at all assure the vulgar that their beliefs about the existence of what is out of sight or earshot are quite reasonable and often true, and Berkeley must often himself share those beliefs. He has replaced their "real things" with ideas; can he support their beliefs unless he knows that these ideas exist?

Now, of course it will be at once suggested that God, in Berkeley's system, guarantees the existence of these ideas. To answer this would be to anticipate our argument, but we may ask here whether this is at all evidence for the existence of remote sense data or ideas and the "things" of naïve realism. No, God functions as an explanatory hypothesis and what his presence explains must already be known to exist. Berkeley would admit (and deplore) that if the world that lies beyond our ken were that "inert matter" of the materialists no God might or need exist, at least as a perceiver of them. What proves God's presence, he thinks, is that there is no other conceivable hypothesis to account for what he must take to be known facts: ideas unperceived by ourselves. We have unshakable beliefs that some things exist outside our perception. By *A* they can only be ideas. If we know this, we can proceed to *B,* which tells us that there must be a mind to perceive them. But we have no need of any such hypothesis unless we have some known fact to explain. Berkeley never produces any evidence for the fact, except *A*. The basic issue is therefore over this premise. We shall now consider in a general way what seems to lie behind his confidence in *A*. He has made an all-important decision about the character of the perceived world and, by extension, of the unperceived world. Its character as perceived involves necessarily for him other things related to it, that is, minds. The world, he thinks, possesses on the very face of it the property of being perceived. Must we endorse his ascription of this property to things? Is it the plain matter of fact, if fact at all, which Berkeley thinks it to be that everything has this property? Let us consider this.

THE FAVORED RELATION

Berkeley has firmly convinced himself that the objects of our perception are but sensibles. These he cannot imagine except as in minds or perceived by them. Can these views be brought into question?

When we find ourselves in a situation where one person finds that inconceivable which another does not, there is no ready solution. The best that can be hoped for is perhaps the internal coherence of a system, but this is hard to disengage from a system's reference to fact and the possibilities of experience. Traditional systems of philosophy, even the most strict, are of a degree of informality that often prevents decision about these matters. But it may not be amiss to resort to some sort of hypothesis about the situation.

In the philosophy of objects of perception we see a tendency toward one or other of what we may call "most favored relations." It may be as easy to convince oneself of the doctrine of the priority of matter as it is that of mind since this depends upon whether the object of perception is initially thought of as standing in some peculiar relation to a perceiver or to a substratum or perhaps to something in still another direction. The "relation" itself arises from a very dubious source: the object is prejudicially described by a relational term. If it is described as the given, it follows that there must be a giver, and if a giver then perhaps also a receiver, or, again, perhaps not. If it is called a set of qualities, there will inevitably ensue a quest for that which the quality is a quality of. If it is called an "object," in a sense found only among epistemologists, there will be a search for a subject. Even to attempt to refrain from chasing into the wilds, to concentrate intensely upon the object before us, to call it an "essence," has its special hazards. To borrow a trite analogy, if someone were to call it a nephew, this would inspire a search for its uncle. There is in each case a "favored relation." The difficulty lies in the initial ascription of the property of being perceived to things found in perception and in the exclusion of the conceivability of any other relation when the relation to minds is universalized. Yet doubts linger about matter when we see Berkeley commit himself so unreservedly to mind. Or, in another philosophy, we are astonished at the way in which essences zoom out of nonexistence into our orbit and vanish again forever into nonexistence. Or we are frustrated in our efforts to give some meaning to an occult *substance* underlying phenomena. We are bewildered at the complexity things assume when, with Aristotle, we patiently seek to make room for nearly all these so-called relations, to mind, to matter, to God, and to any other movements or causes there may be thought to be. This is not, of course, to cast any particular suspicion on any of these views, since they may all have their special adequacy—though this is to embrace still another "philosophy,"—nor have we done justice to them perhaps. We should have in each case to try to understand why the particular relation is chosen and universalized. We have merely emphasized that it is in some preferred relation that these theories culminate.

For Berkeley the favored relation links the object, the physical world, to its perceiver. In the *Commentaries* he says that "existence is *percipi* or *percipere*."[32] He repeatedly offers us these alternatives which are presumed logically independent of each other but yet also somehow interdependent. But unless his whole work is proof of the exhaustiveness of the alternatives, it is never proved. How could we be even moderately certain that perceivers and perceptions exhaust the universe? It is almost as if one were to seek to prove that the world consists of hunters and game. There are, of course, hunters who carry their passion for the chase to such a length that "nothing else exists" for them. If the sophist was an angler, as Plato said, the Berkeleyan philosopher is perhaps such a hunter.

The alleged exhaustiveness of the particular alternatives *percipi* and *percipere* implies that for every existent thing other than minds there exists a mind peculiarly related to it as its perceiver. As they walk in the garden, Philonous has little difficulty in persuading Hylas that every flower and pebble they see is a *sensible* thing and thus perceived. But they both also believe that there are far more things in the universe than these, and that they are out of reach of present perception. The next step is to say that these *can be no more than* ideas and that they depend on some mind. But even if we grant that "all sensible things are perceived" is analytic, we do not know that whatever exists (even excepting minds) is a sensible thing, nor that the alternatives *percipi–percipere* are exhaustive. The first of these again is premise *A,* the second is *B* or perhaps a consequence of it.

There remain thus two principal issues to consider. One is the cogency of *A,* or the question whether it is true even in the sense which Berkeley attaches to it. The second is the question of the existence of remote perceivers. We may doubt that every existing thing is an idea or sensible or that there is a perceiver for every existing thing. If indeed *B* is true (that all ideas are perceived), these come to the same thing. But we wish first to put the emphasis on the question of the perceivers. This takes us at once to the role of God in Berkeley's scheme and to the nature of minds more generally. We shall then return finally to challenge *A.*

AUT DEUS AUT NIHIL

We shall be considering the need and the adequacy of the idea of God in Berkeley's system. Let us begin with an example drawn from a situation remote from present perception, where God, according to Berkeley, is particularly indispensable. It is the sort of example Berkeley objects in being. God as Aristotle sees him, who never deigns to "perceive" but only thinks, would appear to be of no avail here, and yet in this respect Berkeley's God resembles Aristotle's somewhat too much, since he does not perceive through sensation.

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[32] *Commentaries,* entry 79.

The hypothesis of divine action which Berkeley has need of would be required only if there were *sensibles* known to be abroad, for example, in that remote time when the earth was young. This is a prior condition for invoking a divine observer or perceiver. In arguing the dependence on mind of anything, x, Berkeley always proceeds from the premise that x is sensible. Then by exhibiting a seemingly exhaustive array of types of sensibles he seeks to prove that the *esse* of sensible things is *percipi*. He must first know that x is a sensible and that this sensible exists. But there are x's, no more remote than the interior of the nearest pebble, which Berkeley cannot actually know to be sensibles. So it is with the primeval earth. If there were no sensibles known to be present at that remote time, the hypothesis of a perceiving observer would be superfluous.

Not only is God invoked to complete the theory: *"esse* is *percipi"* is taken to be a rather vital confirmation of God's existence. "Men commonly believe that all things are known or perceived by God, because they believe the being of a God; whereas I, on the other side, immediately and necessarily conclude the being of a God, because all sensible things must be perceived by Him."[34] This argument we may call the epistemological proof of God's existence. His actual use of it is circular. He has no reason to believe that remote sensibles exist except on the supposition that God perceives them, but he has no reason, leaving other arguments aside, nor any need to believe that God or any other perceiver is there present except that there exist remote sensibles which must be perceived by someone. The existence of these is begged from the start.

The importance of God for Berkeley's theory can hardly be overestimated. "All those bodies which compose the mighty frame of the world, have not any subsistence without a mind; . . . their *being* is to be perceived or known; . . . consequently so long as they are not actually perceived by me, or do not exist in my mind, or that of any other created spirit, they must either have no existence at all, or else subsist in the mind of some Eternal Spirit."[35] These possibilities are thus offered: either a thing exists or not; if it exists, it either exists in Berkeley's mind or in some other; if it exists in some other mind, it exists or *percipere*."[32] He repeatedly offers us these alternatives which are presumed logically independent of each other but yet also somehow interdependent. But unless his whole work is proof of the exhaustiveness of the alternatives, it is never proved. How could we be even moderately certain that perceivers and perceptions exhaust the universe? It is almost as if one were to seek to prove that the world consists of hunters and game. There are, of course, hunters who carry their passion for the chase to such a length that "nothing else exists" for them. If the sophist was an angler, as Plato said, the Berkeleyan philosopher is perhaps such a hunter.

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[34] *Ibid.*, pp. 424–425.

[35] *Pr.*, 6.

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We shall be considering the need and the adequacy of the idea of God in Berkeley's system. Let us begin with an example drawn from a situation remote from present perception, where God, according to Berkeley, is particularly indispensable. It is the sort of example Berkeley himself considers in his remarks on the creation in the Third Dialogue between Hylas and Philonous.[33]

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[32] *Commentaries,* entry 79.

There is no contradiction, surely, in supposing that the earth existed millions of years ago in that primeval state described by geologists. Nearly the same or the same kind of evidence that leads us to suppose this will enable us to suppose that no living, perceiving human being existed at that time on the earth. But although there were no such perceivers abroad, Berkeley would himself readily say that there were sensible things present, for the earth is a sensible thing, and he has some appreciation of its antiquity. He must also believe that there were sense data or ideas abroad in that remote age, since he believes that sensible things are no more than assemblages of ideas apprehended by observers. Since the state of the earth in that time reduces, then, to a complex of ideas, we may ask whether Berkeley has, apart from whatever evidence he thinks he has for certain minds existing at the time, better evidence for thinking that there were ideas existing than the materialist has for thinking that there was matter. (And we could also ask whether, if he has no such evidence, he has any good reason for distinguishing his own notion of the nature of inaccessible objects from that of his materialist opponents.) He could accept the inferences of geologists about the early history of the earth, but the only evidence he would have that sensibles existed would be his common-sense belief that something or other then existed and his equation of physical things to complexes of sensibles. No one would wish to deny him the advantages of the simple faith of common sense that things will get along somehow, even without us, but we can challenge the construction he puts upon the propositions he believes.

Referring once again to the syllogistic argument we set forth earlier, we see how much depends upon its first premise. We may readily share Berkeley's belief about such things as the primeval earth. It is an altogether different matter whether we wish to or can agree with his contention that the earth and its contents in that state were ideas or sensible things. But he has nothing more than the equation of sensible things to assemblages of ideas or sense data, and the inclination toward a most favored relation, to support him. Are there not here two very different statements seeking to express two very different facts? We believe on good evidence that such a planet existed, but it is dubious (others might want to say it is meaningless) to say that ideas or sensibles then existed. But there is no way in Berkeley's language even to distinguish between saying that things then existed and that sensibles existed. There is no way to affirm one and deny the other. Some hidden agency seems always to be transforming the fact about the planet into the purported fact about sensibles. It has already been pointed out that this is not just a shift in language, replacing "thing" (and all common names for substances) by "idea"; Berkeley never intended to make merely a linguistic reform with all his effort. That things are ideas is put forth as a statement of fact, the prime "speculative" fact on which his system is founded, namely, the first premise *A* of the principal argument.

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[33] Fraser ed., Vol. I, pp. 471 f.

Everywhere, then, this so-called fact will be appealed to. Sometimes it is through the *present* thoughts or ideas of someone contemplating the past, and not through a now extinct sensible that he seeks to prove dependence on mind. There are ideas that cross my mind here and now as I dwell on the thought of the earth in its earliest state. Even this he takes to be sufficient. The puzzle is how, on Berkeley's view, I am to distinguish these sensibles here and now from the ones that I was supposing to have existed in the far remote past. What is it that inexorably transforms the past into the present, the remote into the local, and transforms what I am supposing into the means of my supposition? We shall return to this question later.

We must now consider God's role in the sustainment of creation. God perceives everywhere and always. Are we then, though unaware of it, speaking of God's sensorium when we speak of the primeval earth? Such a suggestion Berkeley flatly rejects. God does not perceive through sensation. Berkeley leaves it a mystery how sensibles, remote or present, can be perceived if not through sensation, and thus the most that can be said to exist under those conditions is *something or other* as the direct object of God's perceiving. If so, how can Berkeley be so confident that this something or other is not, for example, just the inert matter of the materialists? There is but one answer, his initial commitment to the premise that things are but ideas and that these necessarily involve a perceiver.

Let us ask what sort of divine perceiver is necessary here. The requirement is of course not a religious one. It is God, one or many, as an indispensable hypothesis to account for prosaic facts such as the hidden contents of closets and planets and other objects remote in time and space. Neither the mere existence nor even, perhaps, the omnipotentiality of God is enough. We need also to know that God is *as a matter of fact* doing just what Berkeley thinks must be done to keep remote objects in being. God as Aristotle sees him, who never deigns to "perceive" but only thinks, would appear to be of no avail here, and yet in this respect Berkeley's God resembles Aristotle's somewhat too much, since he does not perceive through sensation.

The hypothesis of divine action which Berkeley has need of would be required only if there were *sensibles* known to be abroad, for example, in that remote time when the earth was young. This is a prior condition for invoking a divine observer or perceiver. In arguing the dependence on mind of anything, *x,* Berkeley always proceeds from the premise that *x* is sensible. Then by exhibiting a seemingly exhaustive array of types of sensibles he seeks to prove that the *esse* of sensible things is *percipi.* He must first know that *x* is a sensible and that this sensible exists. But there are *x*'s, no more remote than the interior of the nearest pebble, which Berkeley cannot actually know to be sensibles. So it is with the primeval earth. If there were no sensibles known to be present at that remote time, the hypothesis of a perceiving observer would be superfluous.

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The importance of God for Berkeley's theory can hardly be overestimated. "All those bodies which compose the mighty frame of the world, have not any subsistence without a mind; . . . their *being* is to be perceived or known; . . . consequently so long as they are not actually perceived by me, or do not exist in my mind, or that of any other created spirit, they must either have no existence at all, or else subsist in the mind of some Eternal Spirit."[35] These possibilities are thus offered: either a thing exists or not; if it exists, it either exists in Berkeley's mind or in some other; if it exists in some other mind, it exists either in a created mind or in God's mind; if it does not exist in either of these, it is nothing at all. In other words, for things not in created minds the choice is *aut Deus aut nihil.* Hence if it is false that nothing exists, God exists, and if God does not exist then we must deny the existence of all events remote in time and space. If we take the epistemological proof only, the likelihood of God's existing is identical with that of remote or recent locally unperceived events. Of things unperceived Berkeley would say that it follows from the fact of their existing that God exists. Of things actually perceived through sensation, he holds that they must be caused by an active cause distinct from the finite perceiver. Either way, then, God must be thought to exist. If we disregard purely imaginary objects, it would appear to be necessary that if anything exists, whether perceived or unperceived, then God exists, and the converse of this is a statement of heroic sweep: if God does not exist, then nothing exists.

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[34] *Ibid.*, pp. 424–425.

[35] *Pr.*, 6.

We may note that apart from this sustaining effort of God the general thesis that whatever exists is perceived by some mind is implausible in the extreme. As we have pointed out, there are untold numbers of events which we confidently believe, on quite ordinary evidence, to have happened, and the same evidence may also convince us that they were never perceived. Berkeley is moved to invoke God or other observers because he has beliefs such as we have about what is remote in space or time. But he has no need of going to the length of postulating other minds or a divine mind unless there is reason to believe that there are sensibles that must be perceived. Horace's advice about the use of the *deus ex machina* might well apply here: Let no god intervene unless a tangle occurs worthy of such a deliverer.[36]

As already noted, the example we have employed is in fact paralleled in Berkeley's discussion of the creation of the world. By a hair's breadth it escapes being wholly transcendental. The account developed by Philonous arises in response to the keen questioning by Hylas about the status of things after the morning of creation and before the advent of man. The creation, says Hylas, was a creation of "real things," and he makes it clear that he means things real enough to satisfy, let us say, a soldier. In the course of creation "the several parts of the world became gradually perceivable to finite spirits, endowed with proper faculties; so that, whoever such were present, they were in truth perceived by them."[37] When Hylas says this still gives the real world only a hypothetical existence, dependent on a finite observer's presence, while no such perceiver is as yet present, Philonous, sublimely disarming, challenges Hylas to prove to him that "there was *no other order of finite spirits* in being, before man"! It is finally not even God but an unknown subangelic order that saves the day. Otherwise Berkeley could not say that the conceiving of "plants or vegetables . . . in a desert where nobody was present . . . is consistent with my principles."[38] He does not tell us whether these finite beings have also performed the necessary office of keeping a sleepless eye on those sensibles which men have neglected since the creation. The principle, Berkeley thinks, is saved. Look where you will in time and space, if there are "real things" (on what evidence?), there are sensibles, and if there are sensibles, then, by a preëstablished harmony, there are perceivers.

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[36] *Ars poetica,* lines 191–192.

[37] Fraser ed., Vol. I, pp. 471, 472.

THE EXISTENCE OF MINDS

We must consider next the nature of these perceivers or minds and their existence. We have seen that Berkeley uses "perceived" as largely synonymous with "in the mind." We must now ask whether we are prepared to accept this. Berkeley consistently defends a substance theory of mind in the *Principles* and *Dialogues,* but he arrived at this view only after thinking very seriously at one point that the mind might be no substance at all apart from a congeries of perceptions, in a manner that reminds one of Hume. There are six consecutive entries in the *Commentaries* that reveal this early stage of his thinking. They culminate in the abrupt statement, "take away Perceptions and you take away the Mind . . . put the Perceptions and you put the mind."[39] And then, "Say you the Mind is not the Perceptions but that thing which perceives. I answer you are abus'd by the words that & thing these are vague empty words . . . without a meaning."[40] Perhaps it took no more than giving utterance to such thoughts to get them, as it were, out of his mind.

There is, however, another interpretation, besides the Humean, possible here. He may be merely emphasizing to himself that *we have no evidence of* the existence of mind or of its faculties, such as understanding and volition, except as acting and at work with ideas or perceptions or volitions. In entry 614 of the *Commentaries* he still remarks that "the Understanding [is] not distinct from particular perceptions of Ideas." The next entry says that "the Will is not distinct from Particular volitions." But on the verso, where he writes in later comments and revisions, he remarks, of entry 615, "This alter'd hereafter." In the earlier view an idea is simply a mental event without *necessary* reference beyond to a mental substance, and thus the demand that perception must always be perception *by something* could be dismissed as either unfounded or resting on mere word habit. This view Berkeley "alters hereafter" and in fact alters before the end of the *Commentaries.* What he retains from it in his later view is only that the mind or its faculties are active only in and through having perceptions. But he now adds in repeated emphatic terms that the mind or spirit is something distinct from its ideas, that it is meaningless to speak of having an idea of it, that we do have a *notion* of it, that we are directly acquainted with it since we *are* just that mind or spirit. These are, for the most part, ancient doctrines to which Berkeley here reverts.

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[38] *Ibid.,* p. 473. Italics mine.
[39] *Commentaries,* entry 580.
[40] *Ibid.*

What, now, does it mean for something to be in the mind, given that the mind is a substance distinct from its ideas? Berkeley offers no explanation other than the oft-repeated statement which we discussed earlier, that to be in a mind is to be perceived by it.[41] When we ask about the *notion* we have of the mind or spirit and its operations, we are assured that "we know or understand the meaning of these words."[42] He very wisely advises us, in a manner which anticipates Mr. Ryle's study of the concept of mind, to beware of "controversies and mistakes with regard to the nature and operations of the mind," especially those that derive from speaking "of those things in terms borrowed from sensible ideas." "The mind of man," it is crudely supposed, "is as a ball in motion, impelled and determined by the objects of sense, as necessarily as that is by the stroke of a racket." All this may be cleared up if philosophers could "be prevailed on to retire into themselves, and attentively consider their own meaning."[43] Clearly he had some ideas on this subject which, had he developed them at that time, might have put his substantival view of mind in a very different light from that of other prevailing views, or changed it altogether. But aside from the Humean heresy that tempted him in the *Commentaries* his view remains orthodox, and there is certainly nothing heretical in this direction in the many astonishing pages he devotes to the subject in *Siris.*

Having alluded to Mr. Ryle, we may go on to say that in undertaking a kind of investigation which resembles what Berkeley recommends but does not carry out, Mr. Ryle's criticism falls as heavily on the latent causal or relational imagery of "perceived *by* the mind" as it does on "*in* the mind," thus condemning both of Berkeley's alternative descriptions of mental functioning.[44]

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[41] Cf. also Fraser ed., Vol. I, p. 470, "Look you, Hylas . . . "
[42] *Pr.*, 27. Cf. *Pr.*, 142.
[43] *Pr.*, 144.

There is an argument in Berkeley's discussion of the mind and its ideas which may enable us to see why he retained the substantival theory. An idea, he believes, is altogether passive. Its passivity is evidence of the functioning of something *active,* a mind or its faculties. One may raise the objection that ideas do not have a label marking them "passive" attached to them. But he has a subtle answer, or at least partial answer, to this, and it contains one of his most important achievements, his doctrine of natural signs. "Passive" and "active" are correlative terms. If ideas are always passive, then, he thinks, there must be something else which is active, and these are correlated as effect and cause, respectively. This is not the vulgar use of "cause–effect," Berkeley finds, for that only relates one idea to another idea. This, he argues, is not causation at all; it is merely a relation between natural signs or portents and what they portend. The sign doctrine of course anticipates in important respects Hume's doctrine of causality. The subtlety of Berkeley's view is that it reserves the notion of causality for something else: it shifts it from the domain of "sign relations" between thing and thing, idea and idea, event and event, to the metaphysical domain of a "ground relation" between ideas as inherently passive and their active ground. Where causality, from Berkeley's point of view, is really involved, he assumes the rationalist doctrine of "ground," of a necessary connection between cause and effect. We can formulate all our practical, everyday, and scientific knowledge or opinion in terms of signs or portents, regularities of succession; but when we ask after the cause of ideas we ask much more than this, and to find it we have to get outside the orbit of mere ideas.

It is in this way that Berkeley believes ideas entail minds. They are *prima facie* passive or effects, and a passive effect, he thinks, entails an active cause. Ideas of imagination are *my* work, *I* cause them, *I* put them together in as bizarre a fashion as *I* will to do. But ideas of sensation are not my work. When I open my eyes I have ideas, whether I will or no.[45] All this is presumably evident on mere inspection of ideas. Since ideas of sense are not my work, the result of my will, and since they require some ground (as Berkeley supposes), they are the work of another mind, and only a mind vastly, even infinitely, greater than mine is their ground or cause. Only God answers to such infinite requirements.

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[44] See Gilbert Ryle, *The Concept of Mind,* e.g., chap. vii.

[45] Fraser ed., Vol. I, p. 407.

But this argument must be challenged. It is not true that ideas appear to be passive, or that together with their other properties such as being red or square they have in any the same sense the property of being effects *prima facie.* It is true that *if* they were *prima facie* effects then something else would be necessarily related to them. But we cannot infer the latter fact from the immediate or *prima facie* properties of the idea unless we are prepared to find a question-begging kind of "relational properties" among these. The basis of Berkeley's argument is nothing more than the favored relation we spoke of earlier. Hume, quite apart from his theory of causality, effectively disposes of this sort of argument in saying that we cannot argue that "because every husband must have a wife, that therefore every man must be marry'd."[46] The analogue for Berkeley ought to be that though every idea must be perceived, it does not follow that everything is an idea. In order for Berkeley's argument to demonstrate the existence of substantival minds, we should first have to be able to accept his rationalistic exposition of the notion of causality and the premise that ideas are inherently effects, that they are or can be found on immediate inspection to be effects without the aid of any other fact about them from their past history.

Whatever the fault or merit of a substantival doctrine of mind, it is not clear that even Berkeley's theory that *esse* is *percipi* strictly requires it. Let us assume that for any given domain, such as sensibles, to be is to be perceived. All that is necessary is that when some sensible exists it is perceived. What now is this "being perceived"? The phrase would usually be either amplified by the words "by someone," "by Smith," etc., or replaced by an active form, "Smith perceives . . ." But it is by no means clear why the argument of "by . . ." must be considered a substance. This obviously derives from the favored relation. We could now proceed to attack, if it had not long since been repeatedly done, first, the relatum of the substantival mind and, second, the relation itself. These two go together. The *perceptum,* as Hume and others treat it, may be taken in what we could call a *terminal* sense. The only further problem would be to adjust this fact to what Berkeley for a time regarded as only a habit of the vulgar, namely, the use of relational and substantival terms in recording the occurrence of perceptions.[47]

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[46] Hume, *A Treatise of Human Nature,* Bk. I, Pt. III, sec. III.

[47] *Commentaries,* entries 579–581.

THE ARROW OF INTENT DEFLECTED

We are now in a position to describe the fundamental error which underlies Berkeley's theory and which is shared by other classical empiricists and idealists. This will make explicit a suggestion which we made earlier.

In the *Principles* and elsewhere there are numerous arguments designed to show that the primary as well as the secondary qualities cannot exist "without the mind." These are steps that lead to the main doctrine which Berkeley has under attack, the doctrine of material substance. We have seen that he regards this doctrine as self-contradictory. The situation seems to Berkeley as absurd as can be: we cannot even conceive of such a thing, though philosophers may invent many words which seem to be about it. In section 23 of the *Principles* we have the strongest statement Berkeley makes about the inconceivability of matter: "When we do our utmost to conceive the existence of external bodies, we are all the while only contemplating our own ideas. But the mind, taking no notice of itself, is deluded to think it can and does conceive bodies existing unthought-of or without the mind; though at the same time they are apprehended by or exist in itself." This view is a familiar one. There are comparable and famous passages both in Locke and in Hume. In Book III of his *Essay* Locke says: "Though words, as they are used by men, can properly and immediately signify nothing but the ideas that are in the mind of the speaker; yet they in their thoughts give them a secret reference" to the "ideas in the minds also of other men" and to "the reality of things."[48] This secret reference he regards as illegitimate. And in Hume we have the following: "'Tis impossible for us so much as to conceive or form an idea of any thing specifically different from ideas and impressions. Let us fix our attention out of ourselves as much as possible: Let us chace [*sic*] our imagination to the heavens, or to the utmost limits of the universe; we never really advance a step beyond ourselves, nor can conceive any kind of existence, but those perceptions, which have appear'd in that narrow compass."[49] Each of the three philosophers ends in the egocentric predicament and for approximately the same reason. The reason is that each has supposed that there is some sort of unseen hand, or hidden field of force, as it were, which deflects our semantic or cognitive intentions, just as, if an arrow is shot or a rifle fired at the moon, the projectile merely describes a trajectory back to the earth. But it is worse than this. The intention seeks out a target, an object, but this ceases to be a genuine object for no other reason than that we have fired at it. Each of our empiricists has, however, respect for "ordinary language." Hence, as in the bromide about Shakespeare, though what we are firing at is not an object at all, it is something by the same name. When the philosophers assemble, they call it by its correct name, "idea."

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[48] Locke, *An Essay concerning Human Understanding,* Bk. III, chap. ii, par. 4–5.

[49] Hume, *A Treatise of Human Nature,* Bk. I, Pt. II, sec. VI.

How shall we deal with this unfortunate result? Let us consider this briefly. Some words are used to refer to things other than our own ideas, and some are not: we have a vocabulary for one and a vocabulary for the other. For example, "idea" commonly serves to describe something mental. When it is now made to denote both subjective and objective entities, we have employed it in a new sense. We begin by using "idea" to refer to the mental and not to the nonmental, where these differ as a thought-up plan of a building differs from a building built. We tend to be drawn into the mentalist's paradox when we allow "idea" to stand both for the mental and the nonmental. If it is argued that not only is the mental mental but that the nonmental is mental too, we can only say that this is either self-contradictory or, if it is not, the terms have suffered a change of meaning, such that there is now a sense in which the nonmental has some *further property* in common with the mental. Let us suppose that there is no simple self-contradiction, but that there is some such property which relates mental and nonmental as species under a common genus. It must be a property different from the one named by "mental" in the original sense, for this sense when misapplied generates the paradox. But the sort of property which Hume and Berkeley suggest is nothing more than simple awareness: we are aware of our aches and pains, dreams and daydreams, hopes and fears, and also aware of chairs and tables, thumbs and clocks. But apparently the clock is no longer a clock when we become aware of it. It is now only an "impression" or "idea." But if "impression" or "sense datum" means just "object of awareness," the result we get is just this: we are aware of objects of awareness. This triviality is the end product of the doctrine of the hidden field of force that somehow deflects all our intentions from reaching "objects," from "the utmost limits of the universe," and forces us back to a perceptual ectoplasm of our own "making."

The "hidden force" which haunts the classical empiricists and idealists is a myth. To suppose that a sentence cannot be about, nor a word refer to, anything extramental is to confuse logical or semantical issues with psychological ones. There is nothing that can prevent us from speaking of colors or atoms unperceived except a decision to speak only of our thoughts and feelings. There is nothing to prevent the arrow of cognition, perception, meaning, or intention from reaching its target, because it is not literally going anywhere.

But even if all our criticisms of Berkeley are sound, the errors are corrigible in that they suggest their own solutions. In the philosophy of perception there are notable advantages even among these three philosophers, and in particular in Berkeley over Hume. Hume's account of perception leaves us in the end with a strange dualism on our hands. We can either live unreflective lives, the life of nature, and feed on the thousand falsehoods, as he supposes them, of common sense, or we can live the life of reason and be unable even to eat an egg to sustain that life, for it may not nourish us and may not even be an egg. Berkeley, on the other hand, is determined to do justice to the profound convictions and to the mode of expression of common sense, to restore harmony between philosophers and men in the street, and to accept the present, the past, and the future. It is an affirmative, optimistic philosophy and invites correction. This is its real value.

MATHEMATICAL REASONING AND ITS OBJECTS

EDWARD W. STRONG

Of the eight hundred and eighty-eight entries which Berkeley made in two notebooks during the years 1707–1708, almost one-fifth comment directly or indirectly upon mathematicians and what they reason about. This concern with mathematics is not to be wondered at. In formulating his doctrine of ideas, Berkeley met at the outset with a problem confronting an empiricist theory which tries to explicate mathematical objects and relations in keeping with its own tests of meaning. How are these objects and relations to be brought in line with a consistent and comprehensive empiricism? We shall find Berkeley answering that in mathematics there are no conceptions divorced from sense, and that terms and expressions employed by mathematicians are worthy of serious consideration only in their use as representative signs.

Berkeley takes the object of geometry to be extension "considered as relative." He thereby places himself in opposition to those who think that extension can be considered as absolute in supposing the mind to be capable of forming abstract general ideas of extension and figure. He is opposed also to those who suppose finite extension to be infinitely divisible. "And as this notion is the source from whence do spring all those amusing geometrical paradoxes which have such a direct repugnancy to the plain common sense of mankind, and are admitted with so much reluctance into a mind not yet debauched by learning; so is it the principal occasion of all that nice and extreme subtility, which renders the study of Mathematics so very difficult and tedious. Hence, if we can make it appear that no *finite* extension contains innumerable parts, or is infinitely divisible, it follows that we shall at once clear the science of Geometry from a great number of difficulties and contradictions which have ever been esteemed a reproach to human reason, and withal make the attainment thereof a business of much less time and pains than it hitherto hath been."[1]

Berkeley's purpose is thus twofold. He will vindicate common sense and, in so doing, rid mathematics of perplexing and useless suppositions. It is his opinion that "Instead of injuring our Doctrine much

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[1] *A Treatise concerning the Principles of Human Knowledge* (hereafter cited as *Principles*), in Berkeley's *Works*, ed. A. C. Fraser (Oxford: Clarendon Press, 1901), Vol. I; sec. 123.

Benefits Geometry."[2] The burden of the common-sense approach is succinctly indicated in the entry in the first notebook which reads, "Ridiculous in the Mathematicians to despise sense."[3] Sense-despising or sense-neglecting mathematicians must be shown the error of their mathematical way. This Berkeley attempts to do by arguing that mathematics divorced from experienced objects and from use is a reasoning about names which stand for nothing.

QUESTIONS ABOUT MATHEMATICS RAISED IN "THE ANALYST"

The Newton-Leibniz controversy about priority in the invention of the calculus had subsided by the time of Newton's death in 1727. The claims advanced by British mathematicians in defense of Newton's right to be called the first inventor extended to arguments by which they sought to maintain the superiority of Newton's fluxional calculus to the differential calculus of Leibniz. Since the latter employed infinitesimals which Newton had disavowed in his *Quadrature of Curves* published in 1704, the defenders of Newton took it upon themselves to maintain, first, that Newton had never used infinitesimals; and second, that the "idea of the generation of quantities" by motion is properly admissible into mathematics whereas infinitely little quantities "have no Being either in Geometry or in Nature."[4] By this defense on grounds of conceivability by the mind and of existence in Nature, the British mathematicians exposed themselves to the attack which Berkeley had begun in the *Philosophical Commentaries* and sought to complete in *The Analyst*. So far as mathematics is merely nominal, the science has no ideas; for ideas are not had independent of perceived or imagined objects. Anything less than the *minimum sensibile* is nonexistent. Mathematicians in their new analysis, however, "consider Quantities infinitely less than the least discernible Quantity; and others infinitely less than those infinitely small ones; and still others infinitely less than the preceding infinitesimals, and so on without end or limit."[5] It is the proper business of mathematicians to consider discernible quantity and assignable number. As for their infinites, writes Berkeley, "we shall discover much Emptiness, Darkness, and Confusion: nay, if I mistake not, direct Impossibilities and Contradictions."[6]

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[2] *Philosophical Commentaries* (hereafter cited as *P.C.*, with entry number), in Berkeley's *Works*, ed. A. A. Luce and T. E. Jessop (London: Nelson, 1948–), entry 248. Similarly, *Principles*, sec. 131.

[3] *P.C.*, 317.

[4] The denial of conceivability and of existence to infinitesimals is typically expressed in "An Account of a Book Entitled Commercium Epistolicum . . ." published in the *Philos. Trans.*, Vol. XXIX (1717), and attributed to John Keill by Newton, who may have had a hand in its composition. "We have no Ideas of infinitely little Quantities and therefore Mr. Newton introduced Fluxions into his Method, that it might proceed with finite Quantities as much as possible. It is more Natural and Geometrical, because founded on the prime ratios of nascent quantities, which have a being in Geometry, while Indivisibles, upon which the Differential Method is founded, have no Being either in Geometry or in Nature."

Berkeley proposes in *The Analyst* "to inquire into the Object, Principles and Method of Demonstration admitted by the Mathematicians of the present Age." To the end that the Infidel Mathematician to whom the work is addressed "may more clearly comprehend the Force and Design" of the work, he appends sixty-seven "Queries" to it. Query 63 asks "Whether such Mathematicians as cry out against Mysteries, have ever examined their own Principles?" The attack is directed against insensible indivisibles, divisibility of quantity *in infinitum,* and the abstract general idea of extension. The following are characteristic questions.

> *Query* 1. Whether the Object of Geometry be not the Proportions of assignable Extensions? And whether, there be any need of considering Quantities either infinitely great or infinitely small?
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> *Qu.* 5. Whether it doth not suffice, that every assignable number of Parts may be contained in some assignable Magnitude? And whether it be not unnecessary, as well as absurd, to suppose that finite Extension is infinitely divisible?
>
> *Qu.* 7. Whether it be possible to free Geometry from insuperable Difficulties and Absurdities, so long as either the abstract general Idea of Extension, or absolute external Extension be supposed its true Object?
>
> *Qu.* 17. Whether the considering Geometrical Diagrams absolutely or in themselves, rather than as Representatives of all assignable Magnitudes or Figures of the same kind, be not a principal Cause of the supposing finite Extension infinitely divisible; and of all the Difficulties and Absurdities consequent thereupon?
>
> *Qu.* 20. Whether all Arguments for the infinite Divisibility of finite Extension do not suppose and imply, either general abstract Ideas or absolute external Extension to be the Object of Geometry: And, therefore, whether, along with those Suppositions, such Arguments also do not cease and vanish?

In his first notebook, Berkeley refers thrice to John Keill as presenting views in mathematics to be argued against.[7] Two of these references (entries 322, 364) have their source in Keill's *Introductio ad Veram Physicam,* first published in 1701. Entry 322 reads, "Mem. to prove against Keil y^{t} the infinite divisibility of matter makes the half have an equal number of equal parts with the whole." Keill did indeed affirm that the infinite divisibility of quantity demonstrated by geometers is an infinite divisibility of matter,[8] and went on in a later article to assert that the divisibility of quantity *in infinitum* is one of the three foundation principles of physics.[9] Keill's conversion of a principle of mathematical analysis into a physical principle was illegitimate in its logic and repugnant in its metaphysics, especially to an immaterialist meeting with such an assertion as the following which begins Lecture V, "Of the Subtility of Matter": "Having, as we believe, proved by undeniable Arguments, the infinite Divisibility of Matter; and sufficiently answered and refuted the Objections that seemed to carry any weight along with them: it remains, that we consider a little the wonderful Subtility of Nature, and those minute Particles into which Matter is actually divided, or of which it is compounded. It would be very easy, by an abundance of Examples, to place these, as it were, before your Eyes, to expose them to your Senses, and even to shew their Smallness by a Calculation: but we shall produce only a few Instances." The little animalcules or mites discovered by "that curious Observor of Nature, Mr. *Lewenhoeck*" are calculated to be of a cubic size equal to a part of an inch represented by 27 over 1 followed by fifteen ciphers. "Hence, what some Philosophers have dreamed concerning Angels, is true of these Animalcules, *viz.* that many thousand of them may dance on the Point of a small Needle."[10] Berkeley writes in entry 364: "Keils filling the world with a mite this follows from the Divisibility of extension ad infinitum."

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[5] *The Analyst; or, A Discourse Addressed to an Infidel Mathematician* (London, 1734), sec. VI.

[6] *The Analyst,* sec. VIII.

[7] *P.C.,* 308, 322, 364.

Such, in Keill, are the offenses against logic and sense which Berkeley seeks to expose in a common-sense defense of immaterialism. He writes in *The Analyst,* "Of a long time I have suspected these Modern Analytics are not scientifical, and gave some Hints thereof to the Public about twenty-five years ago."[11] Presumably he has reference to passages about mathematics in the *Principles* of 1710, but he might also have in mind what he had written about geometry in *A New Theory of Vision* of the preceding year. Both works, as well as the *Philosophical Commentaries,* will be examined to bring out the tests of sense and use which Berkeley formulated and applied in these early writings and subsequently carried forward to *The Analyst.* It will be the burden of my examination to show how the persuasion of common sense dominates to keep Berkeley from capitalizing upon two possibilities which entered his ken. The first leads in the direction of Kant's transcendental aesthetic. This will be brought out in examining Berkeley's accounts of the *minimum sensibile* and of "correspondence" between heterogeneous species of extension. The second possibility is opened in the discussion of numbers as signs. He agrees "that all knowledge and demonstration are about universal notions."[12] He contends that the function of a particular serving as a sign for all particulars similar in kind constitutes universality or renders a thing, name, or notion universal. He insists throughout that expressions in mathematics are nominal unless used as representative signs. But this does not rule out, as unintelligible, analysis by infinitesimals and reasoning by infinite series. Provision has been made for universality which can be comprehended logically without dependence upon empirical reference and without conflict with it. Unfortunately the test of sense—the empirical criterion employed to determine the meaning of mathematical terms and expressions—keeps in thrall the criterion of use by restricting it to representative signs. Berkeley thereby argues that pure mathematics divorced from application is unworthy of serious consideration, that there is no need in mathematics to suppose objects mysterious to sense, and that mathematicians know not what they reason about if they suppose nonsensible objects.

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[8] *An Introduction to Natural Philosophy; or, Philosophical Lectures Read in the University of Oxford, Anno Dom. 1700* (London, 1726), pp. 30–31. "They [the Philosophers "who distinguish betwixt a Mathematical and a Physical Body"] readily allow a Mathematical Body may be divisible *in infinitum;* but they deny that a Physical Body can be always resolved into still farther divisible Parts. But what, I would know, is a Mathematical Body, but something extended into a Triple Dimension: Does not Divisibility belong to a Mathematical Body, by the reason it is extended: But a Physical Body is Extended after the same manner: wherefore since Divisibility depends on the Nature and Essence of Extension itself, and owes to it its Origin, it is necessary that it must agree to all Extensions, whether Physical or Mathematical. For, to use a Logical Expression, whatever is predicated of any *Genus,* is predicated of all the *Species* contained under that *Genus.*"

[9] *Philos. Trans.,* Vol. XXV, No. 315, "Of the Laws of Attraction and Other Physical Principles."

[10] *An Introduction to Natural Philosophy,* pp. 55–56.

[11] *The Analyst,* sec. L.

THE EMPIRICAL CRITERION

Toward the end of his first notebook, Berkeley jots down the following *Axiom.* "No reasoning about things whereof we have no idea." This is his empirical rule, test, or criterion for admitting an entity into mathematics as a meaningful "object" or else designating it as a meaningless "nothing." The rule stated, the conclusion follows: "Therefore no reasoning about Infinitesimals." He adds, "nor can it be objected that we reason about Numbers w^{ch} are only words & not ideas, for these Infinitesimals are words, of no use, if not suppos'd to stand for Ideas."[13] In a later entry he substitutes "names" for "words" to make more clear that numbers by themselves, or considered absolutely, represent nothing.[14] "And whatever mathematicians may think of Fluxions, or the Differential Calculus, and the like," writes Berkeley in the first edition of the *Principles*, "a little reflexion will shew them that, in working by those methods, they do not conceive or imagine lines or surfaces less than what are perceivable to sense."[15] Since the object of geometry, for Berkeley, is extension considered as relative, there can be no reasoning about sensible extension in parts less than the least perceivable unit or *minimum sensibile*. What is this *minimum sensibile?*

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[12] *Principles,* Introd., sec. 15. Berkeley refers to this paragraph in sec. 126: "It has been observed in another place that the theorems and demonstrations in Geometry are conversant about universal ideas."

[13] *P.C.,* 354 (also 421) and 354a.

Starting from definition, a *sensibile* or sensible is that which is perceived by the senses. Berkeley could thus designate a finite extension perceived by sight or touch to be a *sensibile,* but nowhere have I found him using the Latin word for a whole having *minima sensibilia* as component parts. Rather, he speaks of "sensible extensions" or of "finite lines," reserving the word *sensibile* for the indivisible, fixed, smallest perceptible part. He contends that, "upon a thorough examination it will not be found that in any instance it is necessary to make use of or conceive *infinitesimal* parts of *finite* lines, or even quantities less than the *minimum sensibile:* nay, it will be evident this is never done, it being impossible."[16] The least perceptible part is also designated as a visible or tangible point. These points are said to compose a finite line, to be indivisible, to be fixed and determinate in size, and to be equal for all perceivers. On one account, the *minimum sensibile* is a sensed object or perceived least part of a finite, sensible extension. On another account, its determination lies in the structure of the visive faculty. It is this Kantian doctrine which makes intelligible the assertion that the number of points seen by a perceiver within his visual sphere and the size of the points discriminated are the same for all perceivers. It is this doctrine which accommodates Berkeley's insistence that it makes no difference whether a perceiver has clear or blurred vision, whether he is perceiving an object near or far, whether he is within the confines of his room or under the open sky, and whether he looks with naked eyes or through an enlarging glass.

The two accounts of the *minimum sensibile* just sketched can be reconciled with each other by maintaining a consistent differentiation between the *minimum sensibile* as the structure of a perceptive faculty and the *minimum sensibile* as the least unit thereby sensed as a component part of a sensible extension. The former is not an object but is on the mind side. We can have no idea of it any more than we can have an idea of mind, but can call it a notion and one which is strictly *a priori.* The *minimum sensibile* which is a denotable object is "strictly sensible."[17] Berkeley, however, does not maintain in a clear and consistent way the differentiation between the *sensus* and the *sensed* to which he was driven in his attempt to cope with continuity of a line and with constant magnitude. Let us examine the matter more closely, attending first to exposition in which the *minimum sensibile* is treated as a least perceptible object.

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[14] *P.C.*, 763, "Numbers are nothing but Names, never Words."

[15] *Principles,* sec. 132.

[16] *Ibid.*

In *A New Theory of Vision,* Berkeley asserts that the *minimum visibile* is not "distinguishable into parts, nor in any wise consisting of them."[18] By definition accepted from Euclid, a minimum or point is that which has no part. If it be objected that the *minimum visibile* of a man has parts whereby it surpasses the *minimum visibile* of a mite, "I answer," Berkeley writes, "the *minimum visibile* having (in like manner as all other the proper and immediate objects of sight) been shewn not to have any existence without the mind of him who sees it, it follows there cannot be any part of it that is not actually perceived, and therefore visible. Now for an object to contain several distinct visible parts, and at the same time to be a *minimum visibile,* is a manifest contradiction."[19] Again, if it be objected that two invisible parts may constitute a visible point, Berkeley replies that this is an illegitimate attempt to compose an idea of nonideas,[20] just as division of a finite line *in infinitum* or into invisible infinitesimals, is a similar nonsensical business.[21]

What Berkeley says of the *minimum visibile* must also be said of the *minimum tangibile,* namely, that it is like in manner to all other proper and immediate objects of touch. Thus when Berkeley asserts that there are "No stated ideas of length without a minimum,"[22] the minimum will be either or both a *punctum visibile* and a *punctum tangibile.* Designating either or both as the *minimum sensibile,* there seem to be two possible ways of explicating what occurs in perception of a finite line. I may argue that I perceive two objects, the finite line and least parts or *minima sensibilia.* A determinate number of these coexisting sensible points make up a finite line by serial collection. Or, I may argue that I have just drawn a distinction without a difference—to perceive the sensible line is nothing else than the perception of the collection of coexisting sensible points. Berkeley speaks of points seen or touched in a line and thus of perceiving both the whole and the constituent parts;[23] but he also speaks of extension as perceived simply in the perception of the number of its sensible points.[24] Since number is a mental act and sign and not an object, sensible extension cannot be perceived as a number of points, but is rather analyzed by the mind into *minima sensibilia,* or least perceptible units. Hence a sensible finite extension or continuous quantity must be first given in perception for the analysis of it into an assignable number of *minima sensibilia.* These are visible or tangible indivisibles; for, writes Berkeley, "To suppose a M.S. divisible is to say there are distinguishable ideas where there are no distinguishable ideas."[25]

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[17] The words "strictly sensible" are used by Luce to characterize Berkeley's *minima* in his note on *P.C.*, 59. He refers to *P.C.*, 70, for Berkeley's definition of *minima* as "simplest, constituent parts or elements" of extension. The tangible line, for Berkeley, is composed of its sensible, indivisible, tangible points. These "points" are thus not Wallis' "intersections" or Keill's "terminations" of lines, but little experienced bodies. For Keill (fn. 8) such bodies are supposed infinitely divisible whereas the Euclidean point ("termination" of a line) is nonextended and indivisible. Berkeley has the task of making out how a *minimum sensibile* is at once extended and indivisible.

[18] *An Essay towards a New Theory of Vision* (hereafter cited as *T.V.*, with section number), in Berkeley's *Works*, ed. Luce and Jessop, sec. 80.

[19] *T.V.*, 81.

[20] *P.C.*, 464.

[21] *Principles*, secs. 124–125.

[22] *P.C.*, 88.

Our exposition so far finds Berkeley treating the *minimum sensibile* as a denotable object. I think it could be argued that Berkeley intended to be strictly sensible in proposing to substitute division of a finite line into an assignable number of sensible points for division of quantity *in infinitum,* but it can hardly be argued that he managed to be. Consider the following questions raised in the *Philosophical Commentaries.* He asks whether a *minimum visibile* is extended?[26] and whether a *minimum visibile* be of any color or a *minimum tangibile* of any tangible quality?[27] It is strictly nonsensible of Berkeley to ask such questions if there be no meaning of a *minimum sensibile* other than a perceptible object; for how could Berkeley be strictly sensible and at the same time entertain in question a *minimum visibile* unseeable if not an extended spot, and a *minimum tangibile* untouchable if not an extended speck of some tangible quality? Moreover, if the *minimum visibile* is only an object and has no other meaning, how is it that "The visible point of he who has microscopical eyes will not be greater or less than mine?"[28] Finally, we meet with these questions: Whether the *minimum visibile* be fixed?[29] "Why may not I say visible extension is a continuity of visible points [;] tangible extension is a Continuity of tangible points."[30] Berkeley maintains that he can say so. The two extensions, however, are heterogeneous, since visible and tangible points "can't make one sum."[31] This laid down, there arises the problem of correspondence between visible and tangible minima, and between visible and tangible figures. To this we now turn to discover *a priori* rationalism coming to the rescue of a beleaguered radical empiricism.

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[23] *P.C.,* 70, "Tangible & visible extension heterogeneous because they have no common measure: also because their simplest constituent parts or elements are specifically distinct viz. punctum visibile & tangibile."

[24] *P.C.,* 287, "Extension being the Collection or distinct coexistence of Minimums i.e., of perceptions intromitted by sight or touch, it cannot be conceiv'd without a perceiving substance."

[25] *P.C.,* 343; also 439 and 464.

[26] *P.C.,* 273.

[27] *P.C.,* 442.

In a last entry about minimum sensibles in his *Philosophical Commentaries,* Berkeley writes, "Tho it might have been otherwise yet it is convenient that the same thing w^{ch} is M.V. should be also M.T. or very near it."[32] He can be taken to mean that the least perceptible unit is the same, or nearly the same, for both senses. Berkeley, however, goes on to point out in *A New Theory of Vision* that objects are perceptible under a microscope which cannot be seen by the naked eye. From this he concludes the uselessness for everyday life of having microscopical eyes.[33] Such magnifying eyes would perceive objects which touch does not discriminate, whereas naked eyes conveniently do not. Assuming, for the moment, that Berkeley can make sense of a "same thing" which is least, or nearly so, for vision and touch, how will he meet the following difficulty? The thing which is a *minimum tangibile* will, when inserted under a microscope, present visible parts not discernible by touch. Moreover, a least perceptible object for naked eyes will by microscopical eyes be observed to have parts. But this cannot be. It contradicts the definition of a *minimum sensibile* as "that wherein there are not contain'd distinguishable sensible parts."[34] It conflicts also with the assertion that the *minimum visibile* "is exactly equal in all beings whatsoever that are endowed with the visive faculty."[35] The discussion of the *mini-*

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[28] *P.C.,* 116.
[29] *P.C.,* 66.
[30] *P.C.,* 78a.
[31] *P.C.,* 295.
[32] *P.C.,* 869.
[33] *T.V.,* 86, "But it is certain from what we have already shewn that the *minimum visibile* is never greater or lesser, but in all cases constantly the same: and in the case of microscopical eyes I see only this difference, to wit, that upon the ceasing of a certain observable connexion betwixt the divers perceptions of sight and touch, which before enabled us to regulate our actions by the eye, it would now be rendered utterly unserviceable to that purpose."
[34] *P.C.,* 439.
[35] *T.V.,* 80.

mum sensibile in *A New Theory of Vision* is a struggle with this difficulty which requires two accounts, that of the *sensum* and the *sensed,* for its resolution.

The discussion starts from the two sorts of objects apprehended by sight. The one is properly tangible as perceived and measured by touch and not immediately falling under the sense of seeing; the other is properly and immediately visible, by mediation of which the former is brought into view. "Each of these magnitudes are greater or lesser, according as they contain in them more or fewer points, they being made up of points or minimums." Declaring it certain that sensible extension is not infinitely divisible, Berkeley affirms, "There is a *Minimum Tangibile* and a *Minimum Visibile,* beyond which sense cannot perceive. This every one's experience will inform him."[36]

Berkeley next differentiates tangible from visible magnitude. "The magnitude of the object which exists without the mind, and is at a distance, continues always invariably the same: But the visible object still changing as you approach to, or recede from, the tangible object, it hath no fixed and determinate greatness." Berkeley concludes from this that when we speak of the magnitude of anything it must be the tangible magnitude that is meant, "otherwise there can be nothing steady and free from ambiguity spoken of it."[37] The proper measures to be employed in judging magnitude are tangible and not visible inches and feet, for these latter are not constant, determined magnitudes. Moreover, since visible and tangible extensions are heterogeneous species, there is no necessary relation of great or small magnitude perceived by sight to great or small magnitude perceived by touch.[38]

A man born blind and made to see objects would judge them greater or smaller by a greater or lesser number of visible points. "Now, it being certain that any visible point can cover or exclude from view only one other visible point, it follows that whatever object intercepts the view of another hath an equal number of visible points with it; and consequently they shall both be thought by him to have the same magnitude."[39] (For example, a coin intercepting exactly one's sight of the full moon would have the same visual size and the same number of points.) The farther removed I am from an object, the fewer the number of visible points perceptible in that object. Thus it is that a visible object has no fixed and determinate magnitude even though it is said to be made up of points of fixed size and, in any single act of perception, of a determinate number.

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[36] *T.V.*, 54.
[37] *T.V.*, 55.
[38] *T.V.*, 61–62.
[39] *T.V.*, 79.

By what reasoning does relativity of visual size not hold for the visible point? The *minimum visibile,* writes Berkeley, "not being distinguishable into parts, nor in any wise consisting of them, it must necessarily be the same to all." This is the reason given in support of the assertion, "No exquisite formation of the eye, no peculiar sharpness of sight, can make it less in one creature than in another."[40] The visible point is thus declared to be absolute in size for all perceivers; yet what renders it so in their perceiving? The answer beyond argument from definition is indicated in the further assertion: "Of these visible points we see at all times an equal number." A visual sphere, the same in all perceivers, is a fixed frame for perception of objects irrespective of distance and of magnification.

Like the *minimum visibile,* the *minimum tangibile* is said not to be distinguishable into parts nor in any wise consisting of them. Is there, then, for the tangible faculty as for the visive faculty, a fixed perceptual frame such that no exquisite formation of an end organ, no peculiar acuteness of touch, can make the tangible point less in one creature than in another? And, to take the further step, do we touch at all times an equal number of points of equal size? A consistent phenomenologist must raise such questions about touch after he has raised them for vision. The fact that Berkeley does not do so in *A New Theory of Vision* leads us to look for the reason why he does not. There is no tangible object except for him that touches it, just as there is no visible object except for him that sees it; but where moving to and fro will change the number of visible points I see in a sensible extension, there is no variability, presumably, when I run a finger over a tangible inch and thereby over all the tangible points of that inch length. Berkeley does not tell us how many tangible points there are in the tangible inch, nor how we would proceed to count them. It is his contention, however, that all perceivers of a tangible inch will discriminate *minima tangibilia* the same in size and in number. Here the number is the same for all, not because, as with vision, there is a visive faculty and visual sphere the same for all, but because objects touched are constant in their magnitudes.

Berkeley appeals to definition of a point to counter the objection that the least point seen by a man looking with naked eyes is not the least point seen by the man with microscopical eyes. This is no empirical answer to an empirical objection. Dismissing it, we have the Kantian-like solution remaining in assertion that both fixity of least visual size and determinateness of number the same for all are structured in the visive faculty, or the visual sphere of that faculty. No such solution seems to be needed for touched objects. But suppose that I have microscopical touch and you have not. I will then discriminate more points in a touched line than you. Since, for Berkeley, magnitudes are greater or lesser as they contain more or fewer points in them, all tangible magnitudes will be greater for the man with microscopical touch than for him without such touch. There is no more escape, and no other way of escape, for touch than there is for vision from perceptual relativity. Indeed, Berkeley's account of tangible magnitude turns out less satisfactory for constancy and determinateness than his account of visual magnitude since no answer is provided to the objection of microscopical touch.

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[40] *T.V.*, 80.

I find Berkeley nowhere asserting precisely that a visible point is a fixed minimum irrespective of magnification because its determination lies in the sensory rather than in the object sensed. Yet he does assert that the number of points which can be discriminated is so located. For example, he counts it a defect of the visive faculty that the extent or number of points at once perceivable to it "is narrow and limited to a certain degree. It can take in at one view but a certain determinate number of *minima visibilia,* beyond which it cannot extend its prospect."[41] His assertion that the size and number of these *minima visibilia* are exactly equal for all beings endowed with a visive faculty has no empirical verification and thereby remains an *a priori* principle.

Berkeley, I judge, set out to be strictly sensible in countering infinite divisibility of quantity by a doctrine of the *minimum sensibile.* It may be esteemed a mark of his genius to have moved in his reasoning toward an anticipation of Kant's transcendental aesthetic. This was not the way he wanted to go, for he seems to have been more forced to it than choosing. He would, I think, have stayed entirely with the *minimum sensibile* understood as a sense object—a least perceptible spot or particle—had this meaning sufficed to answer how the size and number of points can be asserted exactly the same for all perceivers. Though he has recourse to definition against objections which assert parts of visible or tangible points, the Euclidean designation of "no part" serves not at all to defend indivisibility of a perceptible object. He must assert at once that a point is indivisible but that it is also perceptible, to have the *minimum sensibile* serve as he needs to have it do in combating invisibles. He needs, then, to find a way of having his perceptual relativity of objects and of transcending it too. That way, starting with a subject-object relation, is, on the subject side, the faculty or *sensum* so structured in all perceivers that it delivers constant, determinate, indivisible *minima sensibilia.*

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[41] *T.V.*, 83.

The problem of heterogeneous species remains to be examined. "It will be demanded," Berkeley writes, "how visible extension and figures come to be called by the same name with tangible extension and figures, if they are not of the same kind with them?"[42] He answers, "Visible figures are the marks of tangible figures ... which by nature they are ordained to signify. And because this language of nature doth not vary in different ages or nations, hence it is that in all times and places visible figures are called by the same names as the respective tangible figures suggested by them, and not because they are alike or of the same sort with them."[43] Is the ordained correspondence readable by sense? How is it that the visible square is universally the sign of the tangible square but never of any other figure? What renders the visible square more fit to represent the tangible square than a tangible circle? That it is more fit Berkeley agrees.[44]

Berkeley tries to establish a sensible correspondence: " ... we see the visible figures contain in them distinct visible parts, answering to the distinct tangible parts of the figures signified or suggested by them."[45] Yet the very heterogeneity of the visible and the tangible species of extension rules out a *seen* correspondence. The square I *see* is the visible square; the square I *touch* is the tangible square. There yet remains the question how the former is comprehended universally as the sign of the latter. It is no sensible answer to say that the number of parts in each of the two species of square is the same; for number is not a sense object, but a mentally constituted sign. To locate the signification in the language of nature while still stipulating a *sensible* reading of the language leaves us still with heterogeneity unbridged. Even if God perceives, as we do not, a relation in natural language by which tangible figures answer to visible figures, this is of no help to us who have no such perception. The way out here, as in the doctrine of the *minimum sensibile,* is by the high *priori* road.

Restrictive devotion to common sense—a devotion incapable of solving the problem of correspondence—keeps Berkeley from concluding that the ordained relations of signification are *a priori* categories common to all minds. The problem, moreover, remains partly masked in *A New Theory of Vision* because he has not yet got beyond the notion that tangible extension and figure rather than visible have a first claim to be taken as the proper objects of geometry. Thus he declares that visible figures are of no use otherwise "than as they represent or suggest to the mind the particular tangible figures connected with them." The faith of a rationalist then enters in his assertion that the connection of signification depends not at all as do words upon the arbitrary appointment of men, but "is fixed and immutably the same in all times and places. A visible square, for instance, suggests to the mind the same tangible figure in Europe that it doth in America. Hence it is that the voice of the Author of nature, which speaks to our eyes, is not liable to the misinterpretation and ambiguity that languages of human contrivance are unavoidably subject to."[46]

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[42] *T.V.*, 139.
[43] *T.V.*, 140.
[44] *T.V.*, 142.
[45] *T.V.*, 142.

The discussion of geometry in *A New Theory of Vision* continues and concludes with the theme that geometry is a science concerned with tangible extension and figure. Berkeley devotes several paragraphs to arguing that a pure spirit—one seeing but not touching things—could not know geometry, and ends as follows: "By this time, I suppose, it is clear that neither abstract nor visible extension makes the object of geometry; the not discerning of which may perhaps have created some difficulty and useless labour in mathematics."[47]

THE CRITERION OF USE

Number, unlike extension, is that whereof we have no sensible idea, since it is not an object of sense. Nor does arithmetic have for its object abstract ideas of number. If number be defined as a collection of units and the argument granted that there is no idea of unity or unit in the abstract, it follows that "there are no *ideas* of number in abstract, denoted by the numeral names and figures." Theories in arithmetic, therefore, when divorced from the names and figures, and from particular things numbered, "can be supposed to have nothing at all for their object. Hence we may see how entirely the science of numbers is subordinated to practice, and how jejune and trifling it becomes when considered as a matter of mere speculation."[48] This chiding and even scornful notice of number theory would be more readily comprehensible if referring just to mathematicians caught in attempted forgery of existence from logical considerations alone. Berkeley, however, leaves no doubt about intent to disprize theory divorced from practice. It is this he calls "mere speculation" and the "vanity of . . . pretence" on the part of mathematicians who, "deluded by the specious show of discovering abstracted verities, waste their time in arithmetical theorems and problems which have not any use."[49]

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[46] *T.V.*, 152.
[47] *T.V.*, 159.
[48] *Principles*, sec. 120.

In contrast to such trifling, empty pursuit, the proper and profitable consideration of numbers treats them as signs which "direct us how to act with relation to things, and to dispose rightly of them." Berkeley comes to the conclusion that "theorems concerning numbers, are in reality conversant about no object distinct from particular numerable things; except only names and characters, which originally came to be considered on no other account but their being *signs,* or capable to represent aptly whatever particular things men had need to compute."[50]

Mathematical expressions which do not stand for objects or ideas and thus are found empty of meaning by the empirical criterion may still be significant if they serve as signs. As Berkeley formulates the criterion of use, number is meaningful where used to count, compute, or measure something sensible. Number worthy of serious consideration is number "assigned" or "assignable" and thereby serving as a representative sign. Berkeley does not go on to explicate how number-signs represent universally, but refers the reader to his discussion of "words" in the Introduction to the *Principles.* The reader will there find him rejecting all reasoning in mathematics about "abstract extension" while acknowledging that reasoning in mathematics is abstract. The argument follows.

Berkeley takes Locke to assert that the mind can form the abstract general idea of a triangle by abstracting from the various shapes of particular triangles. This Berkeley finds unimaginable and inconceivable. He challenges anyone to "try whether he has, or can attain to have, an idea that shall correspond with the description which is here given of the general idea of a triangle—which is neither oblique nor rectangle, equilateral, equicrural nor scalenon, but all and none of these at once."[51] In any event, no such doctrine is needed. Universality does not consist "in the absolute, positive nature or conception of anything, but in the relation it bears to the particulars signified or represented by it; by virtue whereof it is that things, names, or notions, being in their own nature *particular,* are *rendered universal*... the particular triangle I consider, whether of this or that sort it matters not, doth equally stand for and represent all rectilinear triangles whatsoever, and is in that sense universal."[52]

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[49] *Principles,* sec. 121.
[50] *Principles,* sec. 122.
[51] *Principles,* Introd., sec. 13.

In the second edition of the *Principles,* in 1734, Berkeley added a qualification to the argument. "And here it must be acknowledged that a man may *consider* a figure merely as triangular; without attending to the particular qualities of the angles, or the relations of the sides. *So far he may abstract.*"[53] The abstraction admitted is that of a *notion considered* as marked off from an *idea perceived, imagined,* or *conceived.* Berkeley has thereby made way for logical significance independent of sense and of practical use, and still not trifling and jejune. A notion considered—that is, made out in meaning with respect to logical operations and relations—need not be puerile because nominal and need have no empirical reference to be intelligible. Berkeley could have allowed this while still insisting that sensible measures supply the meaning of terms such as "definite" and "determined" for experienced lengths, figures, and volumes. Yet to allow this is to admit that mathematicians may proceed intelligibly in solutions of physical problems by methods of analysis employing expressions which sense cannot confirm. Not so, Berkeley maintains. One example will show how he reasons on this matter.

The ten-thousandth part of an inch line, Berkeley argues, is "universal only in its signification, whereby it *represents* innumerable lines greater than itself, in which may be distinguished ten thousand parts or more . . . After this manner, the properties of the lines signified are (by a very usual figure) transferred to the sign; and thence, through mistake, thought to appertain to it considered in its own nature."[54] One is indeed confused who mistakes a sign for what is signified; but how is one who thinks that "the ten-thousandth part of an inch" means a minute part of that length mistaking a sign for what is signified? Berkeley answers that the ten-thousandth part of an inch is a magnitude less than the *minimum sensibile.* An individual thus has no *idea,* he talks unintelligibly about nothing, if he supposes that something is denoted by the expression, "the ten-thousandth part of an inch." However, if an inch line is being used in a scheme to represent another length such that, divided into ten thousand parts, each part of that length is perceptible, then the expression is intelligible because it signifies or assigns a sensible part. The argument is one which Berkeley had formulated and repeated in the *Philosophical Commentaries.*[55] Its importance for him lies in the generalization to be drawn from it, namely, that there can be no legitimate sign of an infinite series nor of any quantity less than the *minimum sensibile.*

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[52] *Principles,* Introd., sec. 15.
[53] *Principles,* Introd., sec. 16.
[54] *Principles,* sec. 126.

The domination of the empirical criterion over the criterion of use could have been avoided if Berkeley had followed up the lead of "notions considered." Instead, he stands ready to jettison instruments of mathematical analysis, no matter what their power to solve problems, if they suppose elements which sense cannot perceive or involve operations which sense cannot follow. He contends that the expressions which mathematicians employ are only "vain abstractions" if not signifying things existing, or used in measuring and computing them. A logical comprehension that is not also an empirical knowing is, for Berkeley, a comprehending without an idea. This is impossible, a contradiction, or else a game impossible to take seriously. His contention in the *Principles* that mathematicians "do not conceive or imagine lines or surfaces less than what are perceivable to sense"[56] is central in *The Analyst.* Thus he avers that when mathematicians "consider Quantities infinitely less than the least discernible Quantity" they postulate as groundwork of their speculations something unimaginable and inconceivable. So, tying intelligibility to sense, he has at the mathematicians: "It may justly be questioned whether, as other Men in other Inquiries . . . are not wonderfully deceived and deluded by Words or Terms, so they likewise are not wonderfully deceived and deluded by their own peculiar Signs, Symbols, or Species."[57]

"THE ANALYST": "PRINCIPLES" AND "DEMONSTRATION"

Berkeley declares it to be his purpose in *The Analyst* to examine the logic or method of reasoning employed by the modern analysts ("how you demonstrate"). His continuing concern, however, lies with application of the empirical criterion and is made manifest in what is required for admission of a principle as "evident." He allows that mathematical expressions in the modern analysis are employed with great skill and management; but this, he says, is "merely technical"—an operating according to rules. He insists that we must look beyond such operating to the "original Principles and Reasons."[58] These are not understood by mathematicians nor by us if ideas are lacking.

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[55] *P.C.,* 260, 341–341a.

[56] *Principles,* sec. 132.

[57] *The Analyst,* sec. VIII.

[58] *Analyst,* sec. XLVII.

His first line of attack seeks to bring out difficulties and contradictions as found by him in Newton's fluxional calculus. He sets forth Newton's suppositions by a paraphrase from the Introduction to the *Quadrature of Curves,* conjoining to this a description of "moments" drawn from the *Principia,* Bk. II, Lemma II. The two selections are presented as having been intended by Newton to be a single, consecutive piece of reasoning with no change of system entering between 1687 and 1704. Newton's assertion in the *Quadratura Curvarum* of 1704, "The least errors are not to be neglected in mathematics," is shown by Berkeley not to jibe with the way in which Newton in the *Principia* gets rid of the term *ab* in the proof for finding the fluxion of a rectangle of two flowing quantities.[59] There seems, he writes, "to have been some inward Scruple or Consciousness of defect in the foregoing Demonstration, and as this finding the Fluxion of a given Power is a Point of primary importance, it has therefore been judged proper to demonstrate the same in a different manner independent of the foregoing Demonstration." He then turns to an examination of the second proof, that of the fluxion of x^n presented in the *Quadratura Curvarum.* The proof is declared "not fair or conclusive" by reason of the way in which increments asserted are subsequently declared to vanish or be nothing, thereby destroying all that was first raised on the supposition "that the Increments were something, or that there were Increments ... Certainly when we suppose the Increments to vanish, we must suppose their Proportions, their Expressions and every thing else derived from the Suppositions of their Existence to vanish with them."[60] No just conclusion, he insists, can be drawn by the rules of right reason from two inconsistent suppositions.

To follow Berkeley in this criticism in which he finds it absurd to treat velocities as proportional to moments, we have first to note how Newton speaks of moments in order to locate what it is that Berkeley is bringing under fire. In the *Principia,* Bk. II, Lemma II, Newton calls any quantity a *genitum* as produced in arithmetic by multiplication, division, or extraction of roots of any terms whatsoever, or in geometry by the finding of extremes and means of proportionals or the finding of contents and sides. "The quantities I here consider as variable and indetermined, and increasing or decreasing, as it were, by a continual motion or flux; and I understand their momentary increments or decrements by the name of moments ... But take care not to look upon finite particles as such. Finite particles are not moments, but the very quantities generated by the moments. We are to conceive them as the just nascent principles of finite magnitudes. Nor do we in this Lemma regard the magnitude of moments, but their first proportion, as nascent."

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[59] *Analyst,* sec. IX.

[60] *Analyst,* sec. XIII.

The first proportion or prime ratio of nascent augments is that with which they appear; the ultimate ratio of evanescent decrements is that with which they vanish. Newton does not clearly indicate that he intends "prime and ultimate ratios" to be read off as a theory of limits. Berkeley, therefore, has good right to inquire about the conceivability of a quantity which, like the Cheshire cat, must be caught in the smile with which it appears or vanishes. Berkeley puts the mystery thus:

> Now as our Sense is strained and puzzled with the perception of Objects extremely minute, even so the Imagination, which Faculty derives from Sense, is very much strained and puzzled to frame clear Ideas of the least Particles of time, or the least Increments generated therein: and much more so to comprehend the Moments, or those Increments of the flowing Quantities in *statu nascenti,* in their very first origin or beginning to exist, before they become finite Particles. And it seems still more difficult, to conceive the abstracted Velocities of such nascent imperfect entities. But the Velocities of the Velocities, the second, third, fourth, and fifth Velocities, &c., exceed, if I mistake not, all Humane Understanding. The further the Mind analyseth and pursueth these fugitive Ideas, the more it is lost and bewildered; the Objects, at first fleeting and minute, soon vanishing out of sight.[61]

Having thrust this dagger home, Berkeley then proceeds to twist it in the heart of the Newtonians who had rejected Leibniz's infinitesimals as having no being either in geometry or in nature. "... though much Artifice hath been employ'd to escape or avoid the admission of Quantities infinitely small, yet it seems ineffectual. For aught I see, you can admit no Quantity as a Medium between a finite Quantity and nothing, without admitting Infinitesimals. An Increment generated in a finite Particle of Time, is it self a finite Particle; and cannot therefore be a Momentum. You must therefore take an Infinitesimal Part of Time wherein to generate your Momentum."[62] If fluxions are said to be the velocities of evanescent decrements, then what are the decrements? For Newton, Berkeley answers: "They are neither finite Quantities, nor Quantities infinitely small, nor yet nothing. May we not call them the Ghosts of departed Quantities?"[63]

Momentaneous increments, nascent and evanescent quantities, fluxions and infinitesimals of all degrees—these are all "shadowy entities" of a metaphysics incomprehensible by the mind of man because no clear, distinct ideas are to be had of them. This is the gist of the argument which seeks to expose the emptiness, obscurity, and inconsistency of the modern analysis with respect to the entities it reasons about. A second argument, to which we now turn, attacks the faulty reasoning from unclear principles.

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[61] *Analyst,* sec. IV.

[62] *Analyst,* sec. XI.

[63] *Analyst,* sec. XXXV.

A model of accurate reasoning or excellent logic is had in Euclid's geometry: "And it must be owned, that when the Definitions are clear; when the Postulata cannot be refused, nor the Axioms denied; when from the distinct Contemplation and Comparison of Figures, their Properties are derived, by a perpetual well-connected chain of Consequences, the Objects being still kept in view, and the attention ever fixed upon them; there is acquired a habit of reasoning, close and exact and methodical: . . . But how far this is the case of our Geometrical Analysts, it may be worth while to consider."[64] Demonstration, Berkeley asserts, requires that the conclusions be in their premises or principles as rigorously deduced from them. Those who would prove their principles from their conclusions and not their conclusions from their principles "must take up with the Induction, and bid adieu to Demonstration."[65]

A mathematician may apply the rules and employ the operations of the fluxionary method to solve problems without considering or comprehending the principles foundational to that method.[66] However, a mathematician does not have, or has not attained to, science "without a precise, clear, and accurate Conception of the Principles . . ."[67] Mathematical principles are not clear and distinct when their objects are unimaginable, and they are not exact if divorced from assignable quantities.[68] Here, for principles, as earlier for objects, the tests of sense and use decide what is evident. Principles which do not pass the tests are deemed "metaphysical," "obscure," and "inconceivable suppositions."

In asking the mathematicians to show how their principles are evident, Berkeley is in part insisting upon consistent suppositions. He properly contends that "by inconsistent Suppositions Truth may be obtained, yet that such Truth is not demonstrated: That such Method is not conformable to the Rules of Logic and right Reason: That, however useful it may be, it must be considered only as a Presumption, as a Knack, an Art, or rather an Artifice, but not a scientific Demonstration."[69] Beyond this part, however, he argues that attempts to place abstruse geometry on "right Foundations" will be found impracticable "till such time as the Object and End of Geometry be better understood, than hitherto they seem to have been." The legitimacy of basic suppositions is made to rest on whether a mathematician has or has not an object-idea or representative signification for the terms and expressions he employs. It is just because the "shadowy entities" of the modern analysis are "so difficult to imagine or conceive distinctly" that they are thereby declared not admissible as "Principles or Objects of clear and accurate science."

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[64] *Analyst*, sec. II.

[65] *Analyst*, sec. XIX.

[66] *Analyst*, secs. XXXII; XXXIII, "But then it must be remembered, that in such Case although you may pass for an Artist, Computist, or Analyst, yet you may not be justly esteemed a Man of Science and Demonstration."

[67] *Analyst*, sec. XLVII.

[68] *Analyst*, sec. XXXVII, "Nor indeed is it an easy point, to form a clear and distinct Idea of any Velocity at all, exclusive of and prescinding from all length of time and space; as also from all Notes, Signs, or Symbols whatsoever. This, if I may be allowed to judge of others by myself, is impossible. To me it seems evident, that Measures and Signs are absolutely necessary, in order to conceive or reason about Velocities; and that, consequently, when we think to conceive the Velocities, simply and in themselves, we are deluded by vain Abstractions."

Two opposite courses were open to the defenders of Newton's doctrine of fluxions against Berkeley's criticisms of it. A defender could think it incumbent upon him to rescue objects and principles by an empirical justification, thus concurring with Berkeley in the testing but disagreeing with his findings. To the contrary, a defender could reject the tests of sense and use, holding them to be extramathematical criteria, and propose logical tests instead as those pertinent to "speculative" mathematics.[70] The first line of defense was held by James Jurin. He accepts Berkeley's demand for conceivability on a sense basis, and replies to the charge that the doctrine of fluxions is obscure by appeal to experience evincing "that the doctrine may be clearly conceived and distinctly comprehended."[71]

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[69] *Analyst*, sec. xxv.

[70] This was the course developed by Colin Maclaurin in *A Treatise of Fluxions* (2 vols.; Edinburgh, 1742). "It is not necessary that the objects of the speculative parts should be actually described, or exist without the mind; but it is essential, that their relations should be clearly conceived, and evidently deduced: and it is useful, that we should chiefly consider such as correspond with those of external objects, and may serve to promote our knowledge of nature" (Vol. 1, p. 52). I have discussed this correspondence ("analogy") between the mathematical and the physical (Newton's mathematical and experimental philosophies) to bring out the key role of measurement in "Newton's 'Mathematical Way,'" *Journal of the History of Ideas*, Vol. XII, No. 1 (January, 1951), pp. 90–110.

[71] *Geometry No Friend to Infidelity; or, a Defence of Sir Isaac Newton and the British Mathematicians* (London, 1734), p. 31. John Colson, another defender, argues that the method of fluxions derives its chief principle (the generation of mathematical quantity by continued local motion) from rational mechanics. Thereby, in reply to Berkeley, he argues that principles and elements of fluxions are exhibited "even to ocular view and inspection."—*The Method of Fluxions and Infinite Series with its Application to the Geometry of Curve-Lines*, by Newton,

Benjamin Robins took the opposite course in defending Newton. Robins recognized two points of vulnerability which had enabled Berkeley to score off Newton: first, the unacknowledged change in system between the *Principia* and the *Quadratura Curvarum;* and, second, the unsettled interpretation of prime and ultimate ratios. With respect to the latter, what was needed was interpretation of these ratios as a theory of limits, and this Robins proceeded to supply. With respect to the former, he admitted, as the Newtonians hitherto had not, that Newton had used indivisibles.[72] Berkeley made no reply to Robins, but Jurin engaged him in controversy,[73] writing like a man who, seemingly joined by an ally in a noble cause, has been betrayed and stabbed in the back.

Berkeley did reply, however, to Jurin's open letter, *Geometry No Friend to Infidelity; or, a Defence of Sir Isaac Newton and the British Mathematicians* (London, 1734). More than a mere profession of conceivability of principles is demanded of Philalethes Cantabrigiensis, the name under which Jurin had written. As for that author's argument about the usefulness of mathematics in its several branches, this is beside the matter in dispute, which has to do with justification of premises. He tells his critic that "obscure principles are not to be admitted in demonstration" and that "Logical errors are in no wise to be measured by the sensible or practical inconveniences thence arising, which, perchance, may be none at all."[74]

Jurin then sought to satisfy Berkeley about principles in a second letter entitled *The Minute Mathematician; or, the Free-Thinker No Just Thinker* (London, 1735). "All that you require of me," he writes, "is to shew that the principles of Fluxions may be clearly conceived. This therefore is what I shall endeavour to do, and in order to render those principles as intelligible as I can, I shall make use of the plainest and easiest examples." These examples, he continues, are presented "to

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translated from the author's Latin original by Colson (London, 1736), "Annotation on the Introduction."

[72] *Mathematical Tracts of the late Benjamin Robins, Esq.* (2 vols.; London, 1761), Vol. II, pp. 94–96, 153–155.

[73] Five letters (three from Robins and two from Jurin under the pseudonym of Philalethes Cantabrigiensis) appeared in issues of *The Present State of the Republic of Letters,* beginning in October, 1735, and continuing until April, 1736. Robins reviews the controversy in the "Preface" to his work, *A Full Confutation of Dr. Jurin's Reply to the Remarks on His Essay upon Distinct and Indistinct Vision* (London, 1740). Referring to the Berkeley-Jurin controversy, he says that he "at last perceived, both by the concessions of Philalethes, and avowed opinions of others, that the erroneous conceptions of the writer on the Analyst on this head [the principles of the science] were more prevalent among those, who approved of the method of fluxions, than I had at first believed; . . ."

[74] *Defense of Free-Thinking in Mathematics,* paragraphs 20, 26.

assist the reader's imagination by representing the proportions between fluxions of all the several orders in a sensible manner."[75] In turning to representation in a sensible manner as means proper for rendering mathematical principles intelligible, Jurin would an empiricist be to meet and beat Berkeley at his own game. He got the worse of it. Not Jurin but Robins, Simpson,[76] and Maclaurin had competence in mathematics and insight into problems raised by Berkeley, enabling them to make way in handling Berkeley's questions. But that is a further story which cannot be told here. Berkeley did not deign to answer Jurin's second letter and withdrew from the controversy he had aroused.

In résumé I map the course of Berkeley's discussion of mathematicians in what they reason about and how they reason, as follows. Initially, Berkeley's philosophical concern with mathematics is to ask how mathematical reasoning in its terms and expressions can be accounted for in a manner consonant with his doctrine of ideas. Number is removed as an obstacle to universal application of his empirical criterion of meaning by the dictum that number is no object of sense but rather a significatory act of the mind. Number signs, he avers, were instituted originally for the sake of counting and computing, and deserve serious consideration subsequently only as they are used representatively. Extension, the object of geometry, will escape from the empirical criterion and remain an obstacle to the new theory of ideas if identified with an extended matter independent of a thinking substance. Contending that the only extension properly considered by mathematicians is that which is finite and relative to sense, Berkeley argues that no analysis of sensible extension is meaningful in which invisibles are supposed. The continuity of a finite line must be read off empirically. To this end, Berkeley submits his doctrine of the *minimum sensibile,* and relies upon this doctrine also in accounting for constant magnitude. The *minimum sensibile*—a *punctum visibile* or *tangibile*—is the least sensible object; but Berkeley is also found to argue nonempirically in reasoning indivisibility of a point from its definition and in reasoning constant, fixed size from the structure of the visive faculty and from the "correspondence" of sight and touch readings of the language of nature.

The criterion of use is first introduced to be a meaning-test of number. Berkeley throughout insists upon "original intention" and "true use" of number, namely, that of assigning amounts to things in counting, computing, and measuring them. In contrast to this "relative" consideration, and divorced from it, is the "absolute" consideration given to number in speculative mathematics. Wedded to the empirical criterion and subordinating the criterion of use to it, Berkeley speaks slightingly of those operations which are logical only. Under "notion considered" he could have admitted tools of analysis and methods of universalization ruled out by the test of sense, and still have continued consistently to demand a test of empirical reference for propositions about things. His examination of suppositions in *The Analyst* does attend to logical considerations and tests, but the justification of principles is argued extralogically. He acknowledges "due arrangement" of notations in reasoning by rules but depreciates it as "merely technical" while emphasizing analogy by which an arrangement or scheme provides a representative "computing in signs." Unless signification returns us to objects perceptible to sense or conceivable on a sense basis, mathematical thinking remains for Berkeley merely a speculative playing with names and as such an unworthy occupation of reason.

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[75] *The Minute Mathematician,* sec. 18.

[76] Thomas Simpson, *A New Treatise of Fluxions* (London, 1737).

In challenging the reasoning of the mathematicians of his day, Berkeley hoped to banish empty expressions employed by "the mechanic and geometrical philosophers" and to replace them with others meaningful by his tests of sense and use. The argument of conceivability by which some British mathematicians had asserted the superiority of Newton's fluxions to Leibniz's infinitesimals had been drawn empirically, but badly drawn, as Berkeley brought out in his criticisms. He was more successful in forcing questions about philosophy of mathematics that needed to be faced than he was in handling them in the way be wanted—the way of common sense directed to the strictly sensible.

BERKELEY'S USES OF THE TEST OF CERTAINTY

STEPHEN C. PEPPER

I SHALL BE concerned in this paper not so much with Berkeley's theories as with his cognitive tests for belief in them—particularly with the test of certainty upon which he chiefly relies. He makes some use of revelation through the authority of the Bible, as was somewhat common in his time. But in the *Principles* and his *Dialogues,* to which I shall mainly refer, the appeal to revelation is secondary and chiefly to reassure the pious that his theories were not in conflict with the Bible. He also makes some use of the test of corroborative evidence. But much less reliance is placed by him on this than one would expect from a reputed empiricist. His main arguments appear to pivot on an appeal to certainty. Accordingly his writings afford an excellent source for a study of this cognitive appeal.

One has only to run back over one's mind to occasions when one has been asked to accept beliefs on the ground of their certainty to observe that the test of certainty appears in many guises, and that there are several senses of certainty. The appeal to revelation and infallible authority is regarded as a kind of certainty; but the certainty then depends upon the unquestionableness of the authority, and is not the terminal cognitive criterion. The ultimate cognitive criterion is the infallible authority. One is assured of the certainty of the belief when one is assured that it comes from this authority. So, the certainty can be legitimately questioned until the belief is secured by the proper authority, and then its certainty is guaranteed. The authority guarantees the truth of the belief, not certainty. But simultaneously the authority also guarantees the certainty of the belief. So where there is a final appeal to authority, there is not an appeal to the test of certainty as an ultimate or independent cognitive criterion. Certainty as a subordinate test of this sort—subsidiary certainty we might call it—is not what I am concerned with in this paper, but only with certainty as a terminal cognitive criterion.

Certainty is also frequently used as a synonym for the phrase *"practical certainty."* One says it is "practically certain" that a particular political candidate will be elected. The intention here is to signify that there is a large preponderance of evidence in favor of this candidate. But, as we have remarked of authority, the criterion for the belief is not its certainty but the quantity of corroborating evidence for it. The certainty of the belief depends upon the evidence.

We also find a use of practical certainty for an opposite situation, in which the conviction of belief arises not from the great quantity of corroborating evidence but simply from the total absence of uncorroborating evidence. Thus many persons assume that the sky is blue and tree trunks are brown simply because it has never occurred to them to think otherwise or seriously to test their beliefs. They accept these beliefs as practically certain, and they may well turn out to be so on evidential grounds of corroboration, but the certainty these persons feel comes simply from absence of observed noncorroboration. Such certainty is still, however, not a terminal criterion for these beliefs, but only a subsidiary one, dependent on absence of any noticed disconcerting evidence. The appearance of any such evidence would quickly dispel the certainty as soon as it made its impression, and the subsidiary role of the test of certainty here would immediately become apparent.

The criteria of certainty in which I am interested in this paper are such as are set up as terminal cognitive criteria. When as a terminal criterion certainty is ascribed to any belief or object of cognition, this belief or object is considered as certified by the criterion of certainty itself. If it is applied to a belief, no further appeal to authority or supporting evidence is supposedly required to establish its truth. If it is applied to an object or a datum, then these are ultimate facts or evidence and not open to cognitive qualification, interpretation, or correction. In these instances the criterion of certainty supposedly guarantees the truth of the belief or the factuality of the object. And there would be no need to appeal to other cognitive criteria, nor would any other criteria be cognitively relevant.

Certainty as an ultimate criterion in this sense is, as we shall see, constantly resorted to by Berkeley. To be sure, practical certainty is also a source of appeal, and in such a writer is often very difficult to disentangle from certainty as an ultimate criterion. Berkeley's persistent appeal to common sense exploits this ambiguity; for the certainty of common sense, and of the man in the street so far as he has a sense of certainty, is essentially of the preanalytical, uncritical sort. It is a practical certainty because he is unreflective about his beliefs, which, when reflected upon, generally turn out to be much less certain. When, therefore, Berkeley seeks cognitive support in the beliefs of plain common sense, we can never be quite sure whether this is an appeal to the ultimate test of certainty, or simply to practical certainty as an unreflective empirical test embodying the accumulated wisdom of the common man.

One other meaning of certainty must also be excluded from this study. We may call it *inferred certainty.* Thus most philosophers acknowledge a belief in ultimate fact, in "what is the case," and part of this belief is in the incorrigibility of such fact. They would admit that observers may often be in error in their descriptions and interpretations of such fact, but the error is to be ascribed to the descriptions or interpretations, not to the fact itself, which is just what it is, and incorrigible. It is frequently argued that there must be such incorrigible fact as a basis for the possibility of probability judgments. For how can we consistently speak of degrees of probability unless there is a terminus of certainty in respect to which the probability judgments may vary in the degree to which they approach it?

Without acceding to the validity of this argument, I only want to point out here that such certainty is an *inferred* certainty. It is not an intuited certainty, nor in the argument is it offered as a terminal cognitive test. The certainty of ultimate fact is not here based on the test of certainty applicable to a given fact, but on an argument that incorrigible fact must be admitted if we admit degrees of probability in judgments about fact. This argument could be admitted without ever appealing to the test of certainty as a terminal cognitive test. One could still consistently maintain that on the evidence available all empirical judgments of fact appeared to contain an interpretive element, and that the test of certainty was unreliable as an instrument for separating the interpretive from the incorrigible elements in the content of observation. To find out what was probably incorrigible in any context of observation, the best techniques of corroborative procedure would be required. The cognitive tests are those of empirical corroboration, not that of indubitable certainty. The aim of the test is to attain to incorrigible fact such as a hypothetical omniscient mind would intuit as indubitably certain. But since human beings are empirical observers not yet omniscient, our empirical judgments cannot assume such intuitive certainty even though it may be the goal of our empirical procedure. In short, inferred certainty is something possibly legitimately inferred, but the ground for the inference is not the certainty of the conclusions inferred. If it were, the argument would be a begging of the question, and nothing material would have been inferred.

I must point out, however, that something like such a begging of the question does frequently seem to emerge from men who employ this argument. For having, as they believe, proved the necessity of an inferred certainty or of an incorrigibility of fact, they then often triumphantly point to some pet datum of their own and presume that everyone of honest intent must now accept it as certain by intuition. Nothing of the sort, of course, does follow.

At this juncture let me point out, too, that the incorrigible certainty of a mathematical or logical system is also an inferred certainty. That a mathematician may make mistakes in his deductions is admitted, but a peculiar certainty is customarily attached to deductive systems. Given the definitions and the rules of inference, then the certainty of the deductions is regarded as unquestionable. This is not supposedly based on the certainty of each successive step of the deductive process as carried on by the mathematician; for admittedly the mathematicians may make a mistake, transparent as these steps generally are. As human acts in the manipulation of symbols, these steps require corroboration, and so their correctness is not to be considered indubitably certain. But the mathematical system is customarily referred to as deductively certain. This is, accordingly, it would appear, an inferred certainty parallel in the mathematical sphere with the inferred incorrigibility of fact of which we were just speaking. And similarly, just as there is no legitimate transition from the inferred incorrigibility of a fact to its intuitive certainty, so from the inferred certainty of a deductive system there is no legitimate transition to any ultimate intuitive criterion of cognitive certainty for the mathematical procedures. The cognitive reliability of a proof depends on the correctness of the mathematician's manipulations of his symbols, and the test of this correctness is the corroboration of other mathematicians going over his proof. If the proof is corroborated, then it is *inferred* that the propositions necessarily follow from the postulates and that the validity of the proofs is certain. The inference is cognitively based on the corroboration. Such an inferred certainty for a mathematical system is probably well justified. But its justification does not reside in an ultimate test of cognitive certainty, but in an inferred certainty.

So, in our examination of Berkeley's argument we shall not be concerned with questions of certainty resting upon infallible authority, practical certainty, or inferred certainty. These meanings of certainty are none of them in the nature of ultimate cognitive tests of certainty. In none of these ways is the truth of a belief claimed in virtue of its certainty alone. In the first, it is authority that sets up the claim and the certainty is merely ancillary; in the second, it is empirical corroboration that sets up the claim and the certainty is only relative anyway; in the third, the certainty is inferred and sets up no direct claim whatever.

We shall now turn to Berkeley, in whose writings we shall come upon a variety of direct claims to certainty for the beliefs which he holds essential to his argument. It is my opinion that an ultimate appeal to certainty is never cognitively reliable. Consequently, the frequency of Berkeley's appeal to this test is for my opinion very interesting. And I am going to suggest that we observe the fate of those beliefs which he sought to support by that test. I shall confine myself to the argument put forward in his *Principles* and his *Three Dialogues between Hylas and Philonous.*

The main steps in his argument are these: (1) that the only objects of perception are inert sensible ideas; (2) that the only source of activity is spirit which is always present where ideas are, as their existential cause and support; (3) that abstract ideas do not exist whence meaningful statements must ultimately obtain their meaning by reference to sensible ideas or spirits; (4) that all conceptions of matter as distinct from sensible ideas are meaningless or self-contradictory; and (5) that an inference to God as a divine spirit in some way supporting ideas which are not caused by finite spirits like my own intuited spirit is justified and can account for all that we can legitimately mean by the world about us.

The last step is an analogical inference depending on the first two steps and consequently will not concern us much, since it refers us to the first two for its base. The other four steps all in one way or another make an appeal to certainty.

First, what are his arguments for inert, sensible ideas?

He spends a good deal of time with considerations designed to convince people that the qualities they ascribe to perceptual objects are all of the sort they would ordinarily call mental. There are two main arguments he uses to this purpose. The one may be called the argument from identity of status, the other the familiar argument from relativity of sensations. A typical instance of the first is his showing in the First Dialogue how a hand subjected to increasing heat presently feels pain. The status of the sensation of pain as it emerges is no different in the situation from that of heat. If one is mental, so must the other be. Pain is generally regarded as definitely mental. So heat is drawn into the same status. Thus the secondary qualities are amalgamated with the tertiary. Then the primary by the same method are easily amalgamated with the secondary. Thus, since color and extension are indissolubly bound up with each other, there being no such thing as an unextended color, whatever is regarded as the status of color must also be that of extension. Since color as a secondary quality has been acknowledged mental, then so must extension be mental.

Berkeley makes use of dreams to the same end. For instance, in answering the objection that the perception of things at a distance seems like direct evidence that things are not in our minds, he says, "I desire it may be considered, that in a dream we do oft perceive things as existing at a great distance off, and yet for all that, those things are acknowledged to have their existence only in the mind."[1] For our present interest this quotation is noteworthy in exhibiting the fact that Berkeley is not troubled with the discrepancy between an apparent intuited certainty of seeing a thing at a great distance and his view that the feeling of certainty should be discounted here. He cannot even fall back on the excuse that eventually, by recourse to the distant object's being so maintained in God's mind, it really is at a distance; for he promptly in the next section refers to his analysis of distance perception in his *Essay towards a New Theory of Vision*, "wherein it is shown that *distance* . . . is only suggested to our thoughts . . . by a connexion taught us by experience . . ."[2] How then are we to distinguish an apparent feeling of certainty like this of distance perception which Berkeley rejects as unreliable, from appeals to certainty which we shall soon see he holds up as reliable and final?

Together with the argument from identity of status, Berkeley makes extensive use of the relativity-of-sensation argument. The example of the two hands—one hot and the other cold, which, placed together in a pail of tepid water, report contrary judgments of the temperature of the water—is Berkeley's in the First Dialogue. On the assumption that the pail of water must have an invariant temperature, if any temperature at all, Hylas is persuaded by this relativity of judgments that the water has not itself any heat, and that consequently the heat must be an idea in the mind. And the same with all other sense qualities.

He also makes sparing explicit use of another argument: that from the mechanics of the stimulating process by which the stimulus object in the environment is shown to be outside of the sense organ stimulated, it is also shown to be outside of the whole neuromuscular response usually associated physiologically with the intuited sense quality. It is, I suspect, this argument in the background that supports a literal connotation to the expression "in the mind" constantly employed by Berkeley for his ideas, for on this argument they would literally be "in the brain" if situated anywhere. But most dramatically at the beginning of the Second Dialogue Berkeley completely undermines this argument by pointing out to Hylas that, since the latter has already conceded a mental status to primary qualities, it follows that the brain, being an object entirely composed of primary qualities, must be mental also. So Berkeley is forced to rely essentially on the first two arguments.

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[1] *A Treatise concerning the Principles of Human Knowledge* (hereafter cited as *Principles*), in Berkeley's *Works*, ed. A. A. Luce and T. E. Jessop (London: Nelson, 1948–), Vol. I; sec. 42.

[2] *Principles*, sec. 43.

Now all these arguments are of the empirical corroborative type. They do not, however, carry him very far toward making the first step in his theory. For he has, as just shown, undermined his stimulus argument, and neither of the first two arguments offers any evidence for the inertness of ideas nor, on reflection, for their mentality either. The argument from identity of status offers a quantity of corroborative evidence for the hypothesis that primary, secondary, and tertiary qualities are all in the same boat, but nothing is demonstrated by the argument as to the status of the boat. Hylas naïvely permitted them all to migrate into the status he assumed for the tertiary qualities. But he could as well have permitted the tertiary qualities to migrate into the status of the primary. Or again a neutral status might have been instituted for them all, as, in fact, years later was done by Mach and the American Neorealists. So whence the inertness and the mentality of Berkeley's ideas? Not from the identity-of-status argument.

Not from the relativity of sensation argument, either. This argument, on reflection, does not seem to establish much of anything except the untenability of a naïve assumption that only one of an array of determinate characters under a single determinable could, without special justification, really be attributed to an object of perception. It was an adequate reply to a naïve assumption that a rose is a certain shade of red irrespective of illumination, reflected light, and a myriad other conditions familiar to any landscape painter. But the argument in no way establishes the inertness of the colors or their mentality.

So again by what means does he try to establish the inertness and mentality of his "ideas"?

As I examine the linkage of his reasoning, I find the origin of his claims in his definition of "sensible things." Thus where the whole argument begins in the First Dialogue, Philonous says, "It seems, then, that by *sensible things* you mean those only which can be perceived immediately by sense."[3] And Hylas replies, "Right." And just shortly thereafter Philonous repeats this definition, and it is italicized by Berkeley.

The same definition essentially appears in the opening sentence of the *Principles:* "It is evident," writes Berkeley, "to any one who takes a survey of the *objects* of human knowledge, that they are either ideas actually imprinted on the senses, or else such as are perceived by attending to the passions and operations of the mind, or lastly ideas formed by help of memory and imagination . . . By sight I have the ideas of light and colours . . . By touch I perceive . . . hard and soft, heat and cold, motion and resistance . . ."[4] (Italics mine.)

From here Berkeley starts. But just what is he starting from? Is it a hypothesis supported by corroborating evidence and open to verification, or a statement of indubitable immediacy, or a definition stipulating a meaning for a term?

In section 3 of the *Principles* we come upon the following succession of sentences (I will quote the whole section, for it is a typical condensation of all that he has to offer on this topic, and we can do no better than examine it in detail):

> That neither our thoughts, nor passions, nor ideas formed by the imagination, exist without the mind, is what every body will allow. And it seems no less evident that the various sensations or ideas imprinted on the sense, however blended or combined together (that is, whatever objects they compose) cannot exist otherwise than in a mind perceiving them. I think an intuitive knowledge may be obtained of this, by any one that shall attend to what is meant by the term *exist* when applied to sensible things. The table I write on, I say, exists, that is, I see and feel it; and if I were out of my study I should say it existed, meaning thereby that if I was in my study I might perceive it, or that some other spirit actually does perceive it. There was an odour, that is, it was smelled; there was a sound, that is to say, it was heard; a colour or figure, and it was perceived by sight or touch. This is all that I can understand by these and the like expressions. For as to what is said of the absolute existence of unthinking things without any relation to their being perceived, that seems perfectly unintelligible. Their *esse* is *percipi,* nor is it possible they should have any existence, out of the minds or thinking things which perceive them.

In the first sentence, Berkeley seems to appeal to the consensus of opinion: "what every body will allow." He seems to be appealing to the evidence of extensive corroboration—"to any one who takes a survey of the objects of human knowledge." Then comes the transition to "And it seems no less evident [that sense impressions as well as images are mental]." Yet evidently it must in this second sentence have seemed to Berkeley somewhat less evident, or he would not have had to say so. He expects some disagreement with this sentence, and, of course, gets it from many critics, and very dramatically he represents it in the protestations of Hylas in the *Dialogues*. Empirical corroboration now looks somewhat precarious, and so there follows the transition to the third sentence: "I think an intuitive knowledge may be obtained of this . . ." Here is an appeal to intuition—something quite different from weight of corroborative evidence—modestly for the moment preceded by "I think." But this "I think" concession to possible doubt promptly evaporates in a gathering assertion of certainty as the paragraph proceeds. We are momentarily under the impression that what the "intuition" will warrant will be the observed content of the earlier indicated "survey of objects of human knowledge." But instead we find the intuition is directed upon a definition—upon "what is meant by the term *exist* when applied to sensible things."

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[3] *Three Dialogues between Hylas and Philonous* (hereafter cited as *Dialogues*), in Berkeley's *Works,* ed. Luce and Jessop, Vol. II, p. 174.

[4] *Principles,* sec. 1.

We now come face to face with a new and very disconcerting sense of certainty, which I shall call *definitional certainty*. The employers of this sort of certainty often try to persuade their readers of its innocence or, at least, of its minuteness. It is such a trivial sort of certainty! But with what we shall see of its uses by Berkeley as an example, I should like to suggest that we allow definitions the property of stipulation but deny them categorically any property of cognitive certainty.

For now what does Berkeley do? From his intuition of the meaning of the term "exist," he enlarges to the sentence, "The table I write on, I say, exists, that is, I see and feel it; and if I were out of my study I should say it existed, meaning thereby that if I was in my study I might perceive it, or that some other spirit actually does perceive it." In short, by way of his definition of "the term *exist* when applied to sensible things" he actually imports the principle of the "egocentric predicament" (as R. B. Perry later dubbed it) into the very meaning of a color or feeling. This maneuver permits him then to come up with the impressive statement: "This is all that I can understand by these and the like expressions." And in this assertion he is, of course, quite right, because his definition of the existence of sensible things now includes the egocentric predicament: for if by definition a sensible thing is mental, then by definition a sensible thing cannot be nonmental; the very concept of a sensory quality independent of mind becomes a self-contradiction; and Berkeley can then properly assert that "the absolute existence of unthinking things without any relation to their being perceived, that seems perfectly unintelligible." Then follows the famous statement: "Their *esse* is *percipi*, nor is it possible they should have any existence, out of the minds or thinking things which perceive them."

The conclusion is that it is logically impossible for a "sensible quality" to be independent of mind. And this is led up to as a climax of cognitive certainty secure against all discriminiating doubt.

So far as the empirical evidence goes, of course, the last of this paragraph is just as dubious as the first. The appeal to "what every body will allow" is a rather precarious source of evidence. Berkeley could not very well get beyond an "I think" for a belief on such evidence. But through the mediation of a half-concealed definition in the middle of the paragraph, he comes out with an incorrigible certainty of belief in "being is perceiving" at the end.

So, right here with this example before us of such a flagrant use of the cognitive device of definitional certainty, let us mark it clearly as a cognitive fallacy and a device of dogmatism. Logical impossibility, definitional self-contradiction, is not an ultimate or entirely reliable criterion of cognitive value.

I am sure many in this room will not believe that I really mean what I am saying here—namely, that one cannot rely on the intuitive certainty of a logical impossibility or a logical possibility. The certainty of mathematical and logical consistency, I indicated earlier, is an inferred certainty. The same is true when appeal is made to definitional stipulation.

If I define sound as air vibrations, then it is logically impossible that sound should be an auditory sensation or a neural pattern. Is this cognitively certain? Clearly not. Somebody must check up my definitions of auditory sensation and neural pattern as nonvibratory, and, having found that out, check the relation of contradiction between the statement that sound is auditory sensation and my definition of sound as air vibrations. Our knowledge of logical principles, however, supports a reliable belief in the inferred certainty that if I employ contradictory definitions I cannot obtain valid conclusions about the symbols defined. But this is not an intuited cognitive certainty. The evidence for the belief is corroboration.

But, you may say, if I now stipulate that sound is air vibrations, am I not certain at least that I have so stipulated? Definitely I have great practical certainty that I have performed that act, as I am practically certain that I wink my eyes and sharpen my pencil. But I should not be cognitively offended if someone doubts if I have winked my eyes or sharpened my pencil or made a peculiar stipulation about the meaning of the term "sound." And I should be prepared to produce corroborating evidence. Actually I would bring out this sheet of paper and show where I actually wrote down those symbols. Then I could infer the logical impossibility that sound could be mental, if I happened to have another definition stipulating that air waves are nonmental.

So, let me repeat, on the foregoing evidence which could be expanded as desired, that the appeal to definitional certainty is a cognitive fallacy, a device of dogmatism, a hoax. A definitional stipulation has great practical certainty but no intuitive or other unique or ultimate certainty. And logical manipulations of symbols from definitions yield reliable inferred certainty, but again no intuitive or other immediate ultimate certainty. And both practical and inferred certainty depend cognitively on tests of corroboration.

Now, with this behind us, let's return again to Berkeley. As we have indicated, he relies for the mentality of his ideas on the dogmatic device of definitional certainty. To what does he appeal for the inertness of his ideas?

His argument for the inertness of ideas is offered in a typical manner in section 25 of his *Principles*. "Our ideas," he asserts, "are visibly inactive, there is nothing of power or agency included in them." This statement he repeats several times in different ways. "There is nothing else requisite but a bare observation of our ideas," he says, to be satisfied of this truth. The appeal here is to an indubitable immediacy. We look at our ideas and we cannot doubt their passivity. But, as before, Berkeley looks for a certainty stronger than that of indubitable data and almost imperceptibly shifts to an appeal to a definitional certainty. For presently he remarks, "A little attention will discover to us that the very being of an idea implies passiveness and inertness in it, insomuch that it is impossible for an idea to do any thing, or, strictly speaking, to be the cause of any thing." Now, of course, a being as a fact cannot "imply," but the definition of the being of an idea can, and a definition of an idea as inert would make it, "strictly speaking," logically impossible and definitionally certain that an idea would be inert.

So, respecting inertness in ideas, Berkeley appeals first to indubitable immediacy of given content, and then shifts to definitional certainty. Hume, of course, follows Berkeley with respect to the inertness of perceptual content, leaning, I should say, mainly on indubitable immediacy rather than definitional certainty. But, of course, the organicists and even more the pragmatists, with as ardent protestations of indubitable immediacy as either Berkeley or Hume offered, stress the activity and efficacy of perceptual immediacy. The test of indubitable immediacy must then be referred to the higher court of corroboration, for the probabilities of the two hypotheses either way.

We now turn to Berkeley's plea for the existence of spirit. He first seems to argue for this entity on inferential grounds. Since ideas are inert, and yet causal activity seems to occur among them, such an entity as spirit is needed for the causal task. This spirit by definition cannot be an idea, "though," he says, "it must be owned at the same time, that we have some notion of the soul, spirit, and the operations of the mind such as willing, loving, hating, in as much as we know or understand the meaning of those words." Thus, we have no "idea" of spirit, but we may have a "notion." This is in the *Principles*, section 27. The appeal seems to be toward the definition of the words. But in the Third Dialogue the argument is explicit. "I do know," says Philonous, "that I who am a spirit or thinking substance, exist as certainly, as I know my ideas exist."[5] And a little later, "My own mind and my own ideas I have an immediate knowledge of." Here the appeal is to indubitable immediacy. But soon definitional certainty creeps in. "Farther," he says, "I know what I mean by the terms *I* and *myself;* and I know this immediately, or intuitively, though I do not perceive it as I perceive a triangle, a colour, or a sound. The mind, spirit or soul, is that indivisible, unextended thing, which thinks, acts, and perceives . . . and that which perceives ideas, which thinks and wills, is plainly it self no idea . . ."[6]

Yet for all this devoted appeal of Berkeley's to the indubitable certainty of the given and to definitional certainty, the concept of spirit vanished almost immediately under Hume's skeptical scrutiny which led to the latter philosopher's well-known assertion that for his part he was certain he had never stumbled upon a spirit among or behind his ideas or saw any need of one to justify causation. And years later William James saw nothing wrong in one idea's being conscious of another. So again the appeal to certainty availed nothing in preventing others from doubting or offering alternative hypotheses on the evidence available.

Next, what about the grounds for the denial of abstract ideas? Berkeley makes a careful analysis of this problem in the Introduction to his *Principles,* and there are many relevant passages on the subject in the body of the *Principles* and in the *Dialogues.* He distinguishes what may be called (1) the abstract particular, such as a hue abstracted from its extension in a colored patch; (2) the determinable, as W. E. Johnson later called it, such as color as distinguished from the several hues; and (3) the general class, such as "man" or "animal" as distinguished from particular men or animals.

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[5] *Dialogues,* pp. 231–232.

[6] *Ibid.*

Berkeley's analysis of this problem would be regarded as genuinely empirical, in my sense of the term, as a marshaling of the evidence for the acceptance of a hypothesis which appears to offer the most probable description of the factual conditions. As for (1), the abstract particular, he points out that hues never do appear abstractly but always in conjunction with extension, and similarly on the basis of corroborative observation with all other qualities. As for (2), the determinable, such as "colour in abstract which is neither red, nor blue, nor white, nor any other determinate colour," he challenges anybody to indicate such an entity for observation, which is a way of appealing to corroborative evidence. And as for (3), the general class, he offers a similar challenge. "What more easy," he writes, "than for any one to look a little into his own thoughts, and there try whether he has, or can attain to have, an idea that shall correspond with the description that is here given of the general idea of a triangle, which is, *neither oblique, nor rectangle, equilateral, equicrural, nor scalenon, but all and none of these at once?*"[7]

This is all good corroborative empiricism in criticism of Locke's hypothesis, and Berkeley sets up his own nominalistic hypothesis to account for the facts. No test of certainty is needed for these conclusions, and none is offered beyond the occasional ambiguous phrase "it is agreed on all hands," which could be interpreted as just a sort of portmanteau reference to extensive corroboration.

But after this empirical conclusion is reached, the tenor changes. He states his conclusion in these words: "We have, I think, shewn the impossibility of *abstract ideas.*"[8] Improbability of them, yes. But hardly impossibility, except perhaps as a judgment of practical certainty, which was a pretty poor judgment as the event has shown through the many vigorous exponents of the theory of the reality of universals who have flourished since. Even today Berkeley's nominalistic theory is far from a practical certainty.

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[7] *Principles,* Introd., sec. 13.

[8] *Principles,* Introd., sec. 21.

No, in the context and in the uses Berkeley made of his nominalistic doctrine, it gets more and more clear that Berkeley meant literally the "impossibility" of abstract ideas. For through his empirical proof he believed his readers would perceive with indubitable immediacy that only particular ideas could exist. Just as it is *impossible* for Berkeley that an idea should be nonmental and active, it is impossible that it should be abstract. In the First Dialogue, in this connection, Philonous says, "But it is a universally received maxim, that *every thing which exists, is particular*." This is the basic maxim of nominalism. But just what may be Berkeley's cognitive ground for maintaining it is far from clear. That it is a "universally received maxim" is now, was in Berkeley's day, and had been for centuries before, false. Does Berkeley mean, then, that it ought to be a universally received maxim? Doesn't he mean that an examination of all the entities (namely, ideas and spirits) which he in his observations finds to exist shows that these are particulars; and these must be particulars by indubitable immediacy or by definitional certainty, as pointed out earlier in this paper? Doesn't he mean that the doctrine of nominalism and the denial of abstract ideas rests upon his theory of ideas and spirits which in turn rests for him on the cognitive tests of certainty, those of indubitable immediacy and of definitional certainty?

Whether this be the proper interpretation or not, there can be no question, when he applies his doctrine of nominalism as a critical instrument, that it emerges as the device of meaninglessness and that this is a dogmatic appeal to certainty by indirection. For this amounts to a device for placing a *caveat* against criticism on any concept or sentence pronounced as meaningless by the writer's particular theory of meaning. Now Berkeley's nominalistic theory of meaning limits meaningful terms to those which refer to particular inert mental ideas and to particular active spirits as notions. By indirection, then, the meaninglessness of any concepts that do not eventually refer to ideas or spirits is supported by the same cognitive criteria as support these entities—that is, for Berkeley, the tests of indubitable immediacy or definitional certainty.

Berkeley's biting polemic against the materialists with their concepts of matter and a field of location, and against the Aristotelians and others with their concepts of universal forms, amounts merely to his pointing out that their doctrines differ from his, which is obvious, and then labeling them meaningless so as to lift them out of the sphere of significant cognitive consideration—which is far from obvious.

The manner in which Berkeley uses this device is very simple. Here is a concept, *X*. Can this concept be traced in its cognitive references to some particular idea or collection of ideas, or to some particular spirit or collection of spirits? If so, it is a meaningful concept and finds its place in his system. If not, it is a meaningless word and so by a sort of definitional certainty is neither true nor false. Indeed, it is even worse than false, it is by definition outside the sphere of cognitive consideration; for a man with a false concept comes at least within the cognitive area, but a man with a meaningless term has missed the target of cognition altogether.

Let me exhibit one instance of Berkeley's procedure. Hylas suggests in the middle of the First Dialogue that the concept of a "material substratum" is required as a support for the various qualities attributed to a thing. Philonous retorts, "*Material substratum* call you it? Pray, by which of your senses come you acquainted with that being?" Hylas says it is an inference derived by reason to account for the facts. Philonous then presses him to give meaning to it, and suggests that "the word *substratum* should import, that it is spread under the sensible qualities or accidents." Hylas acquiesces, "True." Then says Philonous, "And consequently under extension." And thereupon Philonous shows that extension as an idea is a sensible quality already taken care of. So we get the ridiculous result of two extensions, one as the sensible quality supported, and the other as the substratum supporting it. The point is that for Philonous *substratum* can get no meaning unless it refers to a sensible quality like the idea of extension. Hylas complains, "You still take things in a strict literal sense: that is not fair, Philonous." Philonous replies, "I am not for imposing any sense on your words: you are at liberty to explain them as you please. Only I beseech you, make me understand something by them." Hylas is here rendered speechless, and Philonous after due silence summarizes the situation: "It seems then you have no idea at all . . . of matter."[9]

That is to say, Hylas' concept of "material substratum" is eliminated by Philonous by the device of meaninglessness. And Hylas is forced into a corner by this device because Philonous will not allow that anything has meaning that does not comport with his already established definition of meaning. Hylas *was* being treated unfairly. For what is "literal sense" to one theory of meaning may be metaphor or nonsense to another. The cognitive legitimacy of a concept or theory can never be impugned fairly by an accusation of meaninglessness, but only by examining the evidence on which it is based. One should always be able to demand what is the theory of meaning on which an attribution of meaninglessness is based, and to question the truth of the theory. But then we are calling for the evidence and its corroboration.

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[9] *Dialogues,* pp. 197–199.

I have chosen the foregoing instance of Berkeley's use of the device of meaninglessness because he himself became a victim of the same device employed in the same way by Hume against his own concept of spiritual substance. So there is a bit of irony in this situation. A dogmatic device like poison gas may blow back in one's face. Berkeley was not entirely unaware of the danger; he let Hylas push Philonous rather hard in the Third Dialogue. "You admit," says Hylas, "that there is spiritual substance, although you have no idea of it; while you deny that there can be such a thing as material substance, because you have no notion or idea of it."[10] Philonous gets out of his dilemma by appealing to his "immediate intuition" of his spirit versus his definitional certainty of the self-contradiction of material substance: "In the very notion or definition of material substance," he writes, "there is included a manifest repugnance and inconsistency." In short, the three illicit tests of certainty combine here for a special doctrinal end. Which shows how irresponsible the tests of certainty can be. For Berkeley here found himself threatened with the device of meaninglessness against his spiritual substance. So he neutralized this test for this application by resorting to the test of indubitable immediacy for the affirmation of spirit, and to the test of definitional certainty for the denial of matter.

And here is a good place to conclude this paper. As I am sure you all can see, in studying these uses of the tests of certainty in Berkeley, I have in mind not only the deficiencies of Berkeley's cognitive procedures but also those of a school of modern philosophers who have been using the same procedures in emulation of the achievements of Berkeley and Hume, and reaching similar conclusions by similar illicit and irresponsible cognitive tests.

The surprising thing is that Berkeley with his preference for these methods of certainty and the *a priori* should be considered an empiricist at all—and the same for his modern imitators. His preference for the *a priori* comes out explicitly in a revealing sentence in the middle of his *Principles*.[11] He is replying to an objection to his hypothesis that it runs counter to the large amount of empirical evidence for the hypothesis of a purposiveness in natural processes, a hypothesis difficult to meet on empirical grounds till the evidences for the evolutionary hypothesis become firmly established in the last century. His reply is that "though there were some difficulties relating to the administration of providence, and the uses by it assigned to the several parts of Nature, . . . yet this objection could be of small weight against the truth and certainty of those things which may be proved *a priori,* with the utmost evidence."

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[10] *Dialogues,* p. 232.

[11] *Principles,* sec. 61.

Berkeley is really as much an apriorist as the Continental rationalists. He does not exhibit a full confidence in the empirical methods of letting the evidence speak for itself just as it may fall in the confirmation or disconfirmation of a belief. He wants to force the evidence by some test of certainty that will seal it eternally to a belief against all critics or skeptics. The only difference between him and men like Descartes is that he does not lean on the self-evidence of selected axiomatic principles. He applies his tests of certainty directly to his chosen data in the forms of indubitable immediacy, definitional certainty, and the device of meaninglessness. His basic cognitive criteria are far from empirical.

Nevertheless, with Hume and others of Hume's school, he was influential in promoting an interest in the empirical approach and breaking away from a dependence on *a priori* criteria. But this was owing not to his methods, which were, as we have seen, basically *a priori* in their own way, but to his cognitive intentions and his hypotheses. For his intention was to separate clearly the data of cognition from the constructions inferentially built upon them. This intention was thoroughly empirical, and his hypothesis that the only pure data are sensible ideas has proved a fruitful and widely confirmed hypothesis—as *one* among others on the nature of cognition. But the various tests of certainty by which he sought to place it beyond the reach of criticism have not helped the cause of empiricism; they have retarded it by turning much constructive energy down the blind and empty alley of exposing useless dogmatism. And the identical appeals by the Berkeleyans and Humians of today have not helped, either.

BERKELEY'S THEOLOGY

ROBERT H. HURLBUTT

ALTHOUGH Berkeley claims that his thought is untrammeled by any great respect for authority, it is clear that his theories were developed under motivations which involved at least a very intense desire to support and further Christian doctrines. He felt that an important, if not the most important, value of his "new principle" was its success in this respect. Indeed, in one of his letters he talks as if such a purpose were fundamental in the sense that his epistemology and metaphysics were formed with an eye to their ability "to demonstrate the existence and attributes of God, the immortality of the soul, the reconciliation of God's foreknowledge with freedom of men, and by shewing the emptiness and falseness of several parts of the speculative sciences, to reduce men to the study of religion and things useful." (Letter to Percival, March 1, 1710.) In the Preface to the first edition of the *Principles* he does not emphasize this purpose so much as in the letter just quoted, but even here he says that his philosophy is useful particularly to "those who are tainted with scepticism, or want a demonstration of the existence and immateriality of God, or the natural immortality of the soul."[1]

Therefore it may be of interest to make a rather detailed study of Berkeley's theological arguments, particularly with regard to their epistemological character; to ask in what sense he thought his theory so apt to theological proofs; and to pass some judgment on the validity of his theological reasonings. This essay is presented as a start in that direction. A detailed analysis of Berkeley's theological arguments will be produced, with emphasis upon the character of their axioms or premises, and upon the type of inference claimed and its legitimacy.

Any consideration of the theological tendencies in the Age of Reason must take account of the general classifications of arguments as "ontological," "cosmological," "teleological," and "from design." Berkeley's arguments, while appearing to be unique, can, I think, be understood in terms of this classification. Also to be considered is their *a priori* or *a posteriori* character, their analogical structure, their certainty or probability, the demonstrative or deductive character of their inferences, and the criterion of intuitive self-evidence as applied to their premises. I believe that such a treatment will pave the way toward understanding the theological elements Berkeley considered so important to his philosophy.

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[1] In Berkeley's *Works*, ed. A. A. Luce and T. E. Jessop (London: Nelson, 1948–), Vol. II. All references in this paper will be to this edition.

In *An Essay towards a New Theory of Vision* Berkeley states that our percepts, or objects of vision, constitute a language of the Author of nature.[2] It appears to be in this sense that his further statement that God is present to our minds must be understood. In *The Theory of Vision Vindicated and Explained* he expands upon this view in the following way: "The objects of sense, being things immediately perceived, are otherwise called ideas. The cause of these ideas, or the power producing them, is not the object of sense, not being it self perceived, but only inferred by reason from its effects, to wit, those objects or ideas which are perceived by sense. From our ideas of sense the inference of reason is good to a Power, Cause, Agent."[3] And in the next section: "Our knowledge of the cause is measured by the effect, of the power by our idea."[4]

Now these quotations do not give us a great deal, but they are excellent as an introduction to a few of the more basic aspects of Berkeley's theology. First, it is clear that Berkeley postulates the principle of causality, and though he does not state it here, he assumes as another premise the proposition that any external cause must be mental or spiritual in character. Second, the inference to God's existence and attributes proceeds from perceived ideas, as effects, to an external cause. Again, though we do not see it stated here, Berkeley has another implicit axiom or postulate; that our perceived ideas of sense are inert, or passive, which means that we cannot cause our own ideas and therefore they must have an external cause. This premise may have some empirical basis for Berkeley in that he argues that the only causes of which we have experience are our own motivations and recollections of past ideas, and that, further, we have perceptions which we do not instigate. Finally, he maintains that since we do not directly and immediately perceive God, His character must be taken "measured" from our ideas, which we do perceive. Thus our knowledge of God is inferential and the inference is analogical.

Now this argument is simple and unsatisfactory. It is further expanded, and made correspondingly more complex, in the *Principles* and in the *Alciphron*.

In the *Principles* the doctrine is as follows:

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[2] *Works,* Vol. I, p. 231; sec. 147.

[3] *Theory of Vision,* sec. 11, in *Works,* Vol. II, p. 256.

[4] *Ibid.,* sec. 12, p. 256.

> But if we attentively consider the constant regularity, order, and concatenation of natural things, the surprising magnificence, beauty, and perfection of the larger, and the exquisite contrivance of the smaller parts of the creation, together with the exact harmony and correspondence of the whole, but above all, the never enough admired laws of pain and pleasure, and the instincts or natural inclinations, appetites, and passions of animals; I say if we consider all these things, and at the same time attend to the meaning and import of the attributes, one, eternal, infinitely wise, good, and perfect, we shall clearly perceive that they belong to the aforesaid spirit, *who works all in all,* and *by whom all things consist.*[5]

In the two following sections Berkeley states, further:

> Hence it is evident, that God is known as certainly and immediately as any other mind or spirit whatsoever, distinct from our selves. We may even assert, that the existence of God is far more evidently perceived than the existence of men; because the effects of Nature are infinitely more numerous and considerable, than those ascribed to human agents.[6]

> ... every thing we see, hear, feel, or any wise perceive by sense, being a sign or effect of the Power of God; as is our perception of those very motions, which are produced by men.[7]

And finally:

> Such is the artificial contrivance of this mighty machine of Nature, that whilst its motions and various phenomena strike on our senses, the hand which actuates the whole is it self unperceivable to men of flesh and blood.[8]

Now we here find certain things added to the arguments as presented above from the *Essay towards a New Theory of Vision.* In the first place, Berkeley is not now arguing a simple causal inference from sensed ideas as effects to God as cause. He now has some premises which deal with the order and connection of these ideas. He states propositions concerning the constant order and regularity, the beauty, and the contrivance or purposive relations of the ideas, even to the functional import of pleasure and pain, appetites and passions. It is from these propositions that he infers the attributes and existence of God. Only an intelligent and wise creator could make a world so perfect in its harmonious regularity of motion and purposive order. Only a good creator would give organisms pleasure and pain, appetites and passions, so well adapted to the continuance of the human species. All order and regularity implies, or is correlated with, intelligence in human experience. Therefore, by analogy, whenever we find order and regularity we can infer an intelligent creator. Also, whenever we find purposive order without intention we can infer an intelligent creator. Both kinds of order are interpreted as characteristics belonging to machines. The argument then, concerns the inference that since man's machines all have intelligent creators, the world machine must, by analogy, have an intelligent creator.

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[5] *A Treatise concerning the Principles of Human Knowledge,* sec. 146, in *Works,* Vol. II, p. 108.

[6] *Ibid.,* sec. 146, p. 108.

[7] *Ibid.,* sec. 148, p. 109.

[8] *Ibid.,* sec. 151, p. 110.

We see, therefore, a new set of premises in Berkeley's argument. It can now be summarized in the following way: First, there is still the postulate of causality. The order of natural objects, or of ideas, must have a cause. The harmonious and purposive character of these objects implies that the cause is intelligent. Second, the inference proceeds from a premise concerning effects, that is, the order of nature is treated as a set of effects. Third, the ideas that make up the order of nature are inert, that is, passive. They are not a result of our mind's production. This is important, for only with this premise can Berkeley demand an external cause for the existence of ideas of sense. Finally, he claims that the inference is as demonstrative, as certain, as our knowledge of other selves or other men.

Generally speaking, we would classify this argument as cosmological, because it is based upon the principle of causality and because the inference is from effects to a cause. It must be remembered, however, that the usual cosmological argument has another axiom. It postulates the absurdity of an infinite regress of causes. Such an axiom is not involved in this argument in the *Principles,* and is specifically excluded in the argument in the *Alciphron.* There it is excluded, curiously, because it is "metaphysical."

I believe that the argument should better be called the design argument, for the following reasons. First, it is inference to the existence and attributes of God from premises about the order and contrivance in nature, and this is what the term "design argument" means. The design argument is, I suppose, interpretable as a species of the cosmological argument on the grounds already given.

Since the argument also makes use of the principle of purpose, which Berkeley believes, in opposition to many of his contemporaries, to be valid, his theological arguments are also rightly to be called "teleological." This is the import of his remarks about contrivance, about the passions and appetites, about pleasure and pain, and about means-ends relationships in general. The principle of purpose, then, is made use of by Berkeley, both as evident in the relations of things in the world of nature, the means-ends, process-product relations of things, and as intentions in the mind of God. Therefore, since purpose is involved at both ends of the causal inference, the argument can be correctly designated "teleological."

I have noted that the argument proceeds from effects to cause. The world of nature, both in the sense of regularity of events and their connections, and in the sense of purposive relationships, is treated as an effect or set of effects from which one can infer the character of its cause. Thus the argument is properly called *a posteriori*. This is the general meaning of the term *a posteriori* during the Age of Reason, and it is the meaning specifically given it by Berkeley in his discussions of Newtonian science.

Finally, the argument is analogical in several senses. First, it is based upon the principle that like effects (order, machines) have like causes. That is, order implies intelligence because in human experience all instances of order have been created by intelligence. Further, it proceeds particularly upon the principle of analogy in the sense of the machine. All machines are produced by intelligent creators; the world is analogous to men's machines, therefore it has an intelligent creator. Finally, it makes an analogy between our knowledge of other selves and knowledge of God. Our knowledge of God is analogous to our knowledge of other selves. And it has, for Berkeley, as much certainty and immediacy as knowledge of other selves.

This last analogy, I think, points up the major difficulty in understanding Berkeley's arguments. What did he mean by certainty? And, what kind of certainty did he associate with this theological argument? It would seem that the best way of solving the problem would be to study his ideas about the certainty which attaches to our knowledge of the existence of other selves. This method is made impossible, however, by the fact that Berkeley nowhere, to my knowledge, discusses the nature and certainty of our knowledge of other selves. Thus we are left hanging on this problem.

Most commentators state that Berkeley believed the knowledge of the existence and attributes of God to be demonstrably certain. And there are reasons for accepting this view. Before a detailed consideration of this point is made, however, I think it would be best to present the argument Berkeley developed in the *Alciphron* dialogues. It is his broadest treatment of the question of God's existence and attributes, and adds some interesting elements to what he says in other writings.

Alciphron, the "minute philosopher" as Berkeley characterized those skeptical and deistical thinkers who were forever criticising religion and theology, begins with a demand that the proofs for God's existence and attributes be "nonmetaphysical," that is, be matter-of-fact in basis: "First, then, let me tell you I am not to be persuaded by metaphysical arguments; such, for instance, as are drawn from the idea of an all-perfect being, or the absurdity of an infinite progression of causes."[9] The arguments rejected are those commonly called ontological and cosmological, respectively. It might seem from this statement that Berkeley does not think of his arguments as cosmological in character. I would agree, for reasons given above, and call them design arguments. Jessop, the co-editor of the most recent edition of Berkeley's works, characterizes both arguments, further, as *a priori.* I think, however, that so far as the Age of Reason is concerned, the cosmological argument is properly to be called *a posteriori,* the common definition of *a posteriori* being argument from effects to causes.

Euphranor, representing Berkeley and believers in general, asks Alciphron to clarify what kind of a proof it is that he demands, and states that he will accede to the demand. Alciphron answers:

> Perhaps I may not expect it, but I will tell you what sort of proof I would have: and that is, in short, such proof as every man of sense requires of a matter of fact, or the existence of any other particular thing. For instance, should a man ask why I believe there is a king of Great Britain, I might answer—Because I had seen him. Or a king of Spain,—Because I had seen those who saw him. But as for this King of kings, I neither saw Him myself, nor any one else that ever did see Him.[10]

Now here we have something rather peculiar. Neither in the *Principles* nor in the *Essay* did Berkeley seem to claim matter-of-fact status for his theology. In fact, he claims that his arguments are demonstrative and certain. What Alciphron demands, in short, is a proof which is based upon observation. We know that a thing exists when we have seen it, or when another reliable person has testified to his having seen it. Now Euphranor, representing Berkeley, modifies this demand by a curious argument. He extracts from Alciphron the admission that one does not immediately and directly perceive anything; that we must infer the existence of any object external to us from the character of our ideas of sense. We must, it is agreed by both, infer the being of anything other than ourselves from that with which we directly know—and all we directly know is ideas of sense, taken as the effects of such objects upon us. Berkeley calls them "signs" or "sensible tokens." And such would be the case even with respect to the existence of the kings about which Alciphron was talking.

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[9] *Alciphron; or, The Minute Philosopher,* Dialogue 4, sec. 2, in *Works,* Vol. III, p. 142.

[10] *Ibid.,* sec. 3, p. 144.

Now, having clarified the sense in which our perceptions are to be taken as "matter-of-fact" grounds for believing in the existence of anything, Berkeley proceeds to run the design argument in substantially the same form as given in the *Principles* and in the *Essay*. Here is the argument:

> The soul of man actuates but a small body, an insignificant particle, in respect of the great masses of nature, the elements, and heavenly bodies, and system of the world. And the wisdom that appears in those motions which are the effect of human reason is incomparably less than that which discovers itself in the structure and use of organized natural bodies, animal or vegetable. A man with his hand can make no machine so admirable as the hand itself; nor can any of those motions by which we trace out human reason approach the skill and contrivance of those wonderful motions of the heart, and brain, and other vital parts, which do not depend on the will of man.[11]

Now in this quotation we see stated with admirable conciseness the argument from design. Further, the analogical character of the inference is emphasized. Man's machines have intelligent causes; the world machine, analogously, must have an intelligent cause. Further, the far greater amount of regularity and contrivance in the world machine shows that a proportionately greater amount of wisdom and intelligence went into its construction. Berkeley later adds the following: "Further, is there not in natural productions and effects a visible unity of counsel and design? Are not the rules fixed and immovable? Do not the same laws of motion obtain throughout?"[12] Nothing could be clearer. Here Berkeley is detailing the fact that he thinks of the order and regularity of our ideas in terms of laws of nature. Not unimportant is the statement that such regularities in the events of nature are to be taken as effects from which we argue the character of the cause.

The argument, so far as it seems to emphasize this analogical factor, is slightly different from the ones in the *Principles* and the *Essay*. Actually, the same analogy is in all of them, but I think Berkeley here made an effort to be less metaphysical than in the former works. Thus we see that the metaphysical postulates we noted in his former arguments are in the background, or not noted at all. For instance, he does not place so much emphasis upon the postulate that our sensed ideas, and the order in which they occur, are passive and inert, not produced by man. Second, he does not emphasize the fact that no material substratum can support the occurrence and order of the ideas that make up what he calls laws of nature. He neglects his position that the only known cause of anything is mind. He does, however, keep his emphasis upon two other propositions: that everything must have a cause, and that the occurrence and order of ideas is taken as an effect in the inference to God's existence and attributes.

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[11] *Ibid.*, sec. 5, p. 146.

[12] *Ibid.*, sec. 5, p. 146.

Berkeley finishes this phase of his argument in these words: "... though I cannot with eyes of flesh behold the invisible God, yet I do in the strictest sense behold and perceive by all my senses such signs and tokens, such effects and operations, as suggest, indicate, and demonstrate an invisible God, as certainly, and with the same evidence, at least, as any other signs perceived by sense do suggest to me the existence of your soul, spirit, or thinking principle; ... "[13]

Some signs, having to do with the existence and order of sensed ideas, are further described by Berkeley as "the language of God." God, he believes, speaks to men through the data of sense just as one man speaks to another. This way of rendering the design argument does not, it seems to me, change its general character.[14]

Thus we see that Berkeley's arguments for the existence and attributes of God are consistent in his various writings so far as the basic character of the inferences is concerned. They are *a posteriori;* they are based on the principle of causality and the principle of the inertness of ideas; they proceed from propositions about ideas of nature as effects, and from propositions about the harmonious, regular, and purposive character of the relations between these ideas as effects. They are analogical in form, and each ends with the statement that its conclusion gives knowledge which is at least as certain as that of other selves. What seems to be different is the attitude taken toward this "certainty" just mentioned. In the earlier works, he seems to believe the argument is demonstrably certain. Here, we see some new phrases come into the argument—it is held to be nonmetaphysical, and matter-of-fact. This might make us believe one of two things, either that Berkeley believed that certainty was linked with perception, or that the arguments are not certain at all. We are in the same position as before, basically, for we still have no clear idea how certain Berkeley believes our knowledge of other selves to be.

Now the argument in the *Alciphron* does not stop at this level. It goes into a discussion of the character of the knowledge produced by analogical reasoning. A friend of Alciphron claims that even if one does admit the existence of God it still means nothing, for none other than church writers themselves had noted that the terms "wisdom" and "knowledge," and all other terms taken from man's language and applied to God, simply do not have any common content in meaning. Berkeley's apparent reaction to this criticism is to fall back upon the Thomistic theory of analogy as interpreted by Cardinal Cajetan.[15]

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[13] *Ibid.,* sec. 5, p. 147.

[14] *Ibid.,* secs. 7–9, 12.

It is quite probable that Berkeley was driven to take this up because of a controversy then going on concerning the validity of analogical reasoning when applied to theological questions. In 1709, a Dr. King published a discourse on predestination in which he said that all the ideas we employ respecting the Deity are inevitably limited by our human and finite understanding. Thus our ideas of God are metaphorical and are as different from His real nature as a map is different from actual land and sea. The theological cudgel was taken up in response by Dr. Peter Browne, who criticized King in some detail. His position is that metaphor must be distinguished from analogy. Metaphorical words have to do with imaginary correspondences or resemblances between things. Analogical words, however, used in statements about God, denote actual resemblances or correspondences. Still, Browne agreed that we have no direct or proper notions or conceptions of the attributes or characteristics of God. His view was that our knowledge of God is somewhat like that which a blindman has of light. Now Berkeley disagrees with both King and Browne. His position is that the word "analogy" may be used in a twofold sense, "metaphorical" and "proper." If, for instance, we make the statement that the finger of God appears in this or that event, it is recognized by everyone that the analogy is metaphorical and that the meaning is the same as if we had attributed works done by man to the finger of man. But it is different when we ascribe or predicate wisdom and goodness to God. Here the analogy, between man's wisdom and God's wisdom and between man's goodness and God's goodness, is not metaphorical, for these attributes in themselves have no imperfection, and the only thing we must remember is that when we say that God is wise and good these predicates must be thought of as proportionate to God's being, which is far greater than that of man. Hence one would say that man's goodness is proportional to his degree of being and perfection, and that God's wisdom and goodness is proportional to His degree of being and perfection; and since God's being is perfect, and hence much greater than that of man, then

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[15] *Ibid.*, secs. 16–21.

His wisdom and goodness are also much greater than that of man. This is proper analogy.[16]

The church doctrine of analogy is, therefore, according to Berkeley, greatly misinterpreted if one holds that according to it we have no notion at all of God's characteristics or attributes. As Berkeley says: "This doctrine, therefore, of analogical perfections in God, or our knowing God by analogy, seems very much misunderstood and misapplied by those who would infer from thence that we cannot frame any direct or proper notion, though never so inadequate, of knowledge or wisdom, as they are in the Deity; or understand any more of them than one born blind can of light and colours."[17]

This last statement makes it pretty clear that Berkeley was answering Browne. Browne seems to have thought so too, for he returned the favor in a long book concerned with analogical arguments for the existence and attributes of God. I am not sure whether Berkeley would, in his acceptance of the Thomist doctrine of analogy, also accept the metaphysical hierarchy of being which it presupposes. I am sure that he would not accept the conceptualism involved.

It should be pointed out, I think, that this kind of analogy was not ordinarily concerned directly with arguments for the existence and attributes of God. It usually had to do with the application to God of terms which stand for imperfect earthly and human attributes. Aquinas, who developed the theory, did not use it as a method of inferring God's existence. For this purpose he used cosmological and teleological arguments. Berkeley seems to depart from Aquinas here. This carries us back to the central problem of Berkeley's idea of the certainty of our knowledge of God, which is brought out in the statement above that our knowledge of God is proper "though never so inadequate." This would seem to show that he did not regard such knowledge as demonstrative or certain.

I think, therefore, that we should investigate Berkeley's other references to certainty, demonstration, and *a priori* truth, better to understand what he does think on this matter.

In the *Commentaries* he constantly refers to the importance of demonstration. He often notes that the introduction to the *Principles* should include a detailed description of the nature of demonstration. It was never given, however, and was replaced by the polemic against abstract ideas. Demonstration was a topic much discussed at this time.

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[16] *Ibid.*, secs. 20, 21.

[17] *Ibid.*, sec. 21, p. 170.

Locke had treated it as a type of certain knowledge based upon deductive inference in which each step is intuitively self-evident. It was his position that knowledge of God is demonstrative in this sense. Clarke claimed to have demonstrated the being and attributes of God. It is not surprising, then, that Berkeley is much interested in the subject, and claims a demonstrative character for all the conclusions in the *Principles.* But, as was said, the introduction was never written, and Berkeley concludes that he should withdraw claims to such certainty for his doctrines.

Yet a good deal of confusion remains, for Berkeley still claims demonstrative certainty with respect to the existence and providence of God. The best place to begin the analysis is with the *Principles.* Therein we find several terms—certainty, demonstration, intuition, *a priori,* self-evidence—linked together. In section 21, after the arguments against matter, Berkeley remarks that no further proofs are necessary, and that his demonstrations are *a priori* in character. " . . . I think, arguments *à posteriori* are unnecessary for confirming what has been, if I mistake not, sufficiently demonstrated *à priori,* . . . "[18] And further on: "For to what purpose is it to dilate on that which may be demonstrated with the utmost evidence in a line or two, to anyone that is capable of the least reflection? It is but looking into your own thoughts, and so trying whether you can conceive it possible for a sound, or figure, or motion, or colour, to exist without the mind, or unperceived. This easy trial may make you see, that what you contend for, is a downright contradiction."[19]

He is saying, then, that his demonstrations against matter are certain. And the principal element which makes his arguments certain is that to conceive the opposite is to state a contradiction. Now if we trace out what Berkeley has done in these arguments it is found that he is arguing from a definition. That "*esse* is *percipi*" is for Berkeley an axiom, a self-evident definition, and the ground for his *a priori* arguments. His view is that it is a contradiction in terms for anyone to speak of anything material as being unperceivable or unperceived. He stipulates a definition, as Professor Pepper has said, and argues from it.

Now what is the ground for the definition? Berkeley claims that it is intuitively self-evident. In section 3 of the *Principles,* when writing of the principle "*esse* is *percipi*," he states, "I think an intuitive knowledge may be obtained of this, by any one that shall attend to what is meant by the term *exist* when applied to sensible things." Thus we see that for Berkeley to argue *a priori* is to reason from intuitively self-evident first principles, from definitions.

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[18] *Principles,* Pt. I, sec. 21, in *Works,* Vol. II, pp. 49–50.

[19] *Ibid.,* Pt. I, sec. 22, p. 50.

This interpretation of Berkeley's theory of the *a priori* fits quite well with those statements in the *Commentaries* in which he remarks that all demonstration is verbal. He takes his pattern from mathematics, and avers that ethics and metaphysics, like mathematics, are demonstrable because they are based upon arbitrary verbal definitions.

If he had stuck to this view, things would be fairly clear. But he does not do so. At another place he states that certainty lies in the senses. Here he agrees with the "mob" as he calls it. And when we come to his theology complications immediately arise. His theological arguments, as has been pointed out, do not appear to be arguments from definitions. They proceed from propositions about the existence and orderly occurrence of sensed ideas. Furthermore, since they are based upon propositions about effects, they are *a posteriori.* Finally, there seem to be no intuitively self-evident or certain principles involved and no self-evident definitions. Indeed, he states that our knowledge of God is not intuitively certain. His words are: "I am certain there is a God, tho I do not perceive him have no intuition of him. this not difficult if we rightly understand w^{t} is meant by certainty."[20]

Here he seems to be arguing *a priori* from a definition of the term "certainty," but no such definition is given, and therefore his meaning is unclear. It complicates matters because now we find certainty connected with an argument which excludes intuition and intuitive self-evidence, with which it has been connected in other writings.

When speaking of laws of nature, or the orderly and regularly connected occurrences of ideas, Berkeley makes another distinction concerning demonstration. "Fourthly, by a diligent observation of the phenomena within our view, we may discover the general laws of Nature, and from them deduce the other phenomena, I do not say *demonstrate;* for all deductions of that kind depend on a supposition that the Author of Nature always operates uniformly, and in a constant observance of those rules we take for principles: which we cannot evidently know."[21] Here we have evidence, or certainty, made the criterion of demonstration. Propositions which describe laws of nature are probable and conjectural, and conclusions based upon reasonings from them are also probable and conjectural. Now we are back to the first notion of demonstration, reasoning from intuitively self-evident principles. Here again the reasoning would be from effects, and thus *a posteriori.*

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[20] *Philosophical Commentaries,* entry 813, in *Works,* Vol. I, p. 97.

[21] *Principles,* Pt. I, sec. 107, in *Works,* Vol. II, p. 88.

I think we may piece together his theory in the following way. Berkeley, though not clear in his expressions, means something like this. All reasoning involves inference. If the inference is based upon a self-evident definition, i.e., is verbal, or upon self-evident premises, then it is called demonstration. If the demonstration is based upon self-evident definitions, it is called *a priori.* If the demonstration is based upon premises about effects, it is called *a posteriori.* The latter, in turn, can be based upon premises which are intuitively self-evident and certain principles, in which case it would still qualify as demonstrative and certain and be called demonstration. Further, such *a posteriori* inference can also be based upon probable or conjectural premises, in which case it is called deduction. Thus *a posteriori* probable inferences are called deductions. In terms of this analysis the ontological argument, inferring from an intuitively self-evident definition to the existence of God, is demonstration *a priori* and is certain. The same is true of Berkeley's arguments against matter. The cosmological argument, however, reasons from propositions about effects—propositions held to be intuitively self-evident—and is therefore demonstration *a posteriori* and certain. The upshot of this is that *a posteriori* arguments or inferences can be either certain or probable. That Berkeley would allow such a distinction is clear from his statement in the *Commentaries,* where he is concerned with his principle *"esse* is *percipi":* "Not one argument, of any kind w^{t}soever, certain or probable, a priori or a posteriori from any art or science, from either sense or reason or against it."[22]

This interpretation would still not solve Berkeley's problem, because, as stated above, his statements appear inconsistent. It would not help his statement that certainty is to be placed in the senses. It would be more consistent with his statements that demonstration is verbal, although this would not cover the cosmological argument or his own theological arguments. It would be consistent with his position in the *Principles,* where he links self-evidence, intuition, *a priori,* and demonstration. It would not help his statement in the *Commentaries* that we are certain of God's existence and yet have not intuitive evidence upon which to base the inference involved.

Now to go back to his theological arguments. Are they demonstrative, are they certain? He says that they are both, if we take his statements together. If we take demonstrative certainty to belong to sensed ideas, then he might be interpreted to hold his design argument certain because it is based upon a premise about sensed ideas as effects, and from this certain premise to infer the existence of God as cause. But this would seem to be in disagreement with other statements in which he says that certainty and demonstration belong only to verbal arguments. If we take him to mean by "demonstrative certainty" something which belongs only to verbal arguments based on definitions, then we seem to have a disagreement with the view that certainty belongs only to sensed ideas, and also with the position taken on the arguments for God's existence; for these arguments do not appear to be based on premises which state such definitions. If we take him to mean by demonstration arguments based on premises which present intuitively self-evident propositions about the order of nature or effects in nature, then we seem to have a disagreement with his stated view that propositions about nature and its laws are conjectural and probable. If we take him to mean that his design arguments are probable, this meaning seems to disagree with his view that everything said in the *Principles* is demonstrative, and with some statements in the *Alciphron* which tend to show that he believes the existence of God to be certain and demonstrative. The conclusion appears inescapable—there is no consistent position taken by Berkeley on the matter of demonstration and on the matter of certainty. Simply stated, he says several things about the ground of certainty that do not seem to be compatible. Sometimes the ground of certainty is placed in intuition, sometimes in sensed ideas, sometimes in definition. In the early part of the *Principles* he puts intuition and definition together. Yet at other times he claims certainty for the existence and providence of God and excludes intuition.

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[22] *Philosophical Commentaries,* entry 380, in *Works,* Vol. I, p. 46.

Something should be said about Berkeley's belief that his metaphysics is so apt to theology. To be clear on this point I think it is best to review certain propositions which he uses in his theology and show how they fit into his general philosophical position. First, there is his postulate of causality. He connects it with a further postulate which states that all causes are mental, and this postulate is connected in turn with another which states that all sensed ideas are inert and passive. All these postulates are important in Berkeley's metaphysics, and they are also fundamental, as we have seen, to his theological arguments. Put them together, and Berkeley believes that their combination forms an ironclad ground for arguments to the existence and attributes of God.

It is in this sense that Berkeley thinks his immaterialistic philosophy so apropos to theology. Once having destroyed the materialistic theory, Berkeley believes that all other ways of explaining the order and contrivance of our ideas of nature are gone except one—a designing, creating God. If our ideas are passive their existence and order demands a cause, and the cause must be intelligent. If all causes are mental, then there is no possibility of explaining this order by means of material objects. If, on the other side of the coin, there are no material objects, or no material substratum, then matter cannot be used as an explanation of the order of nature. God is the only way of explaining the order and contrivance exhibited in laws of nature.

Finally, what can be said with respect to the validity of Berkeley's theological arguments? In the first place, some of Berkeley's confusions on the matter of certainty and demonstration have already been discussed. There is a more general problem, however, with respect to the analogical character of his arguments.

For the most part, eighteenth-century thinkers looked upon the conclusions of analogical arguments as probable. Newton and his followers thought of the design argument in this way, and Berkeley, when he is discussing Newton's scientific use of analogy, seems to agree. It has already been noted that in Berkeley's writings there is a curious lessening of interest in demonstration, if we follow the subject through the *Commentaries.* And the arguments in the *Alciphron,* we will remember, bring in ideas which usually are associated with probable conclusions. Along with this we find Berkeley more and more interested in the layman's point of view. In line with this kind of attitude, he states in the *Alciphron:* "And it will be sufficient if such analogy appears between the dispensations of grace and nature as may make it probable (although much should be unaccountable in both) to suppose them derived from the same Author, and the workmanship of one and the same Hand."[23]

But, the limitations of the analogical form of the design argument, even if Berkeley is taken to believe that it gives only probable knowledge, are many. They have been stated by many writers many times. In the *Dialogues concerning Natural Religion,* for example, David Hume delivered a devastating criticism of this type of argument, and so far as I can see, Berkeley's theology escapes from no part of it. A few of the criticisms will be mentioned. Hypotheses based on the principle that like effects have like causes, says Hume, remain mere speculations unless both the cause and the effect are experienced. It is meaningless to say that one thing causes another unless both the cause and the effect have been observed to be constantly conjoined. And—who has seen the origin of worlds? Further, Hume believes that *a priori,* that is, without experiential evidence one way or the other, the world may very well order itself, and if this is the case no creator or designer is needed. The number of analogies discoverable in nature is almost infinite, and the world might just as well be considered a vegetable or animal.

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[23] Dialogue 6, sec. 31, in *Works,* Vol. III, p. 281.

Thus Hume attacks the very analogy that Berkeley so much depended upon, as well as the causal character of the argument. Only a few of the characteristics of the world order are analogous to machines. Now an analogy is well based only so far as common characteristics can be shown to belong to both the objects compared. And when Hume shows that there are in fact few characteristics in common between man's machines and the world order he is very effectively hitting the design analogy where it most hurts. Since the time of Hume the argument has been exposed to rather merciless attacks from many quarters, and is, philosophically at least, out of acceptance.

It appears, then, that Berkeley's theology, the part of his philosophy he most prized, is weak. His arguments are not clear, and even if they were, they would not be very effective.

BERKELEY AS A POLITICAL PHILOSOPHER

JOSEPH TUSSMAN

THE CONSIDERATION of Berkeley as a political philosopher would, I believe, seem less strange or inappropriate to Berkeley himself than it does to us. We do not ordinarily think of Berkeley in this context. As a political or social theorist he has left no mark. His fame is quite properly associated with issues which have been, and will continue to be, discussed by my colleagues in this series.

But, as we know, what we consider significant about a historical figure may have little relation to what he considered important, and it is a common fate to have our sideshows hailed as the main event. This, in small part, is Berkeley's fate.

By nature and inclination Berkeley was, I think, a moralist rather than a speculator. He was a close, lifelong student of public affairs; and while he was no "politician" he was an economist of some insight. He devoted years of his life to the educational adventure to which we owe his American sojourn. And as a philosopher he was an admirer not of Plato but of Socrates. His characterization and evaluation of Socrates is revealing: "Socrates," writes Berkeley, "the best and most admirable man that the heathen world produced," "was always exposing the vanity of the Sophists, painting vice and virtue in their proper colours, deliberating on the public good, enflaming the most noble and ungenerous tempers with the love of great actions. In short his whole employment was the turning men aside from vice, impertinence, and trifling speculations to the study of solid wisdom, temperance, justice, and piety, which is the true business of a philosopher."[1]

Concluding his *Principles of Human Knowledge,* Berkeley writes: "For, after all, what deserves the first place in our studies, is the consideration of God and our Duty, which to promote . . . was the main drift and design of my labours."[2] John Stuart Mill recognized this "drift and design" when he wrote: "The war against Freethinkers was the leading purpose of Berkeley's career as a philosopher."[3] To say this—and I think Mill is correct—is to say that Berkeley was, in intention, a moral or, what is much the same thing, a political philosopher.

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[1] Berkeley's letter to Percival, December 27, 1709: *Berkeley and Percival,* Benjamin Rand, 1914.

[2] Berkeley, *Principles of Human Knowledge,* sec. 156.

[3] John Stuart Mill, *Three Essays on Religion,* "Berkeley's Life and Writings" (New York: Henry Holt and Company, 1874), p. 290.

His philosophic work generally has a theological point; the theological point, a moral bearing.

There is a theme that haunts the works of Dostoevski: "If there is no God, then everything is lawful." In a way this is also Berkeley's theme. He seems increasingly convinced that only the fear of God can make a monster behave like a citizen. The urgency and persistence of his attack on Freethinkers was rooted in his fear that the age of monsters was not far off.

It is this, I suppose, that makes him relevant for us; for once again as civilization seems threatened by man's inhumanity, we are told by many voices that "the fear of God" is the "one thing necessary." It might be of some profit, therefore, to examine this view as it is expressed with clarity and candor by Bishop Berkeley.

Berkeley's earliest and major essay in the area of political philosophy was produced in 1712 when Berkeley was a young man of twenty-seven. It was first delivered as three lectures at Trinity College and was titled "Passive Obedience."

Berkeley sets himself to arm the youth against a pernicious notion, "repugnant to right reason." It is the notion "that an absolute passive obedience ought not to be paid to any civil power, but that submission to government should be measured and limited by the public good of the society; and that therefore subjects may lawfully resist the supreme authority in those cases where the public good shall plainly seem to require it; nay, that it is their duty to so do, inasmuch as they are all under an indispensable obligation to promote the common interest . . ."[4]

This was not what we would call a mere academic question. In arguing against the right to revolt, Berkeley was stepping into the stream of raging controversy.

Let us look back for a moment at the Judgement and Decree of the University of Oxford passed in Convocation in 1683 "against certain pernicious books and damnable doctrines, destructive to the sacred persons of Princes, their State and Government and of all human society." In order, among other things, reads the decree, "that the King's Majesty may be secured both from the attempts of open bloody enemies and machinations of treacherous Heretics and Schismatics; We the Vice Chancellor, Doctors, Proctors, and Masters, Regent and non Regent . . . by our unanimous assent and consent have decreed and determined in Manner and Form the following: . . ."[5]

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[4] Berkeley, *Passive Obedience,* To the Reader.

[5] *The Tryal of Dr. Henry Sacheverell* (London, 1710).

"The following" is a list of twenty-eight propositions declared to be false, seditious, impious, heretical, blasphemous, and destructive of all government. That "All civil authority is derived originally from the People" leads all the rest. That it is lawful under any circumstances to rebel comes in for repeated condemnation. And, of course, King Charles's head is there, too.

The decree ends by enjoining all to whom the instruction of the young is committed to "diligently instruct and ground their scholars in that most necessary Doctrine, which in a manner is the Badge and Character of the Church of England, of submitting to every ordinance of man for the Lord's sake, whether it be to the King as Supreme or to Governors . . . Teaching that this submission is to be clear, absolute, and without exception . . ."[6]

Five years later, however, England, all unheeding, had its Glorious Revolution. Subsequently the successful revolutionists had a stake in the legitimacy of rebellion, especially since the deposed Stuarts still had adherents. The controversy flared up in 1709, three years before Berkeley wrote his essay, in a sensational form. Sacheverell preached his sermon in St. Paul's, staunchly, if heatedly, arguing the absolute duty of passive obedience. Notice was taken. He was accused and tried before the House of Lords for high crimes and misdemeanors—that is, for taking the position which the Oxford decree had called the "Badge and Character of the Church of England"—and was found guilty. There is, I think, some irony in the spectacle of the House of Lords defending the right to revolt. But it was a serious matter tied up with increasing Jacobite activity and involving the Protestant succession. The Sacheverell trial was the sensation of the year. Berkeley followed it and referred to it in his letters. His essay on passive obedience was an attempt to deal with the issue in general terms. His first venture in political theory was thus on a highly controversial question, and I propose now to examine that essay.

Berkeley's position is that there is an absolute, unlimited, nonresistance or passive obedience due to the supreme civil power, wherever placed, in any nation. A reference to Plato's *Crito* in a letter to Percival suggests that Berkeley is defending what he takes to be the position of Socrates—not that the subject must obey the sovereign in all things, but that he must obey *or* patiently suffer the punishment. That is what the "passive" in "passive obedience" means. Berkeley's first task is to make out a plausible positive case for passive obedience or against the right to revolt.

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[6] *Ibid.*

The starting point is "self-love." "Self-love being a principle of all others . . . the most deeply engraven in our hearts," says Berkeley, "it is natural for us to regard things as they are fitted to augment or impair our own happiness; and accordingly we denominate them *good* or *evil.* Our judgment is ever employed in distinguishing between these two, and it is the whole business of our lives to endeavour, by a proper application of our faculties, to procure the one and avoid the other."[7]

As we grow in experience and wisdom, Berkeley points out, our pursuit of happiness becomes more enlightened. We take a wider range of consequences into consideration. Our response to what is before us is tempered by our knowledge of what it brings with it. In short, we grow prudent. There is a suggestion that there is a development of our "nobler faculties," discerning "goods more excellent than effect the senses," but Berkeley does not make much of this point and I shall let it pass.

But Berkeley does not stop with mere temporal prudence. "As the whole earth," he says, "and the entire duration of those perishing things contained in it, is altogether inconsiderable or, . . . 'less than nothing' in respect of eternity, who sees not that every reasonable man ought to frame his actions as that they may most effectually contribute to promote his eternal interest? And since it is a truth evident by the light of nature, that there is a sovereign omniscient Spirit, who alone can make us for ever happy, or for ever miserable; it plainly follows that a conformity to His will, and not any prospect of temporal advantage, is the sole rule whereby every man who acts up to the principles of reason must govern and square his actions."[8]

And it is God's will, Berkeley argues, that we aim at the "general well-being of all men, of all nations, of all ages of the world . . ."[9] This is our duty; and it is to our eternal interest to perform it.

I shall pause here only to point out that the gap between "self-love" and the "pursuit of the good of mankind" is bridged by the intervention of God, who makes the pursuit of the good of mankind pay off in terms of self-love.

It is, then, our duty to pursue the general well-being of all mankind. But how is this to be done? There are, says Berkeley, two ways by which this might be attempted: the first, "by obliging every one upon each particular occasion to consult the public good, and always do that which to him shall seem, in the present time and circumstance, most to conduce to it"; the second, "by enjoining the observation of some determinate, established laws, which, if universally practised, have, from the nature of things, an essential fitness to procure the well-being of mankind; though in their particular application they are sometimes . . . the occasions of great sufferings and misfortunes . . ."[10]

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[7] *Passive Obedience* (hereafter referred to as *P.O.*), sec. 5.

[8] *P.O.*, sec. 6.

[9] *P.O.*, sec. 7.

In what is perhaps the most unusual aspect of his essay Berkeley sets out to attack the first of these alternatives, that is, the view that we discharge our duty best by doing on any particular occasion what appears to our private, disinterested judgment to make most for the public good. Without attempting to reproduce his arguments in detail, I shall try to state briefly, or rather to reformulate, the considerations that seem to him significant.

Berkeley is very much aware, as others all too often are not, of the great difficulties in practice of attempting to make decisions on the basis of a calculation of consequences. It is really impossible to do this with any assurance, says Berkeley, and if not impossible it would, at any rate, take too long. The wisest and best-intentioned men easily go astray. Hence, first, Berkeley holds that the attempt to act in terms of a calculation of the consequences of particular acts is fraught with hopeless uncertainty.

Second, Berkeley argues, it is easier to tell whether any particular act is in conformity with a law or rule than whether its consequences will on the whole contribute to the well-being of mankind or not. For example, it is easier to determine whether or not a particular act violates the rule "Do not bear false witness" than it is to determine what the result of performing such an act in any particular case might be for the general well-being of mankind.

Third, Berkeley holds, we can be more certain that a particular rule would, if universally followed, tend to produce or further the well-being than that any particular act would have such a result. For example, we can be more certain that the rule "Do not steal" would, if universally followed, be conducive to the well-being of mankind than that a particular theft would have one result or another.

There is, I think, a good deal to be said for the position that Berkeley takes.

To begin with, he does not exaggerate the difficulties of calculating consequences of a particular action. Anyone who has tried has recognized, I am sure, that he might often just as well let the toss of a coin settle the matter. We can hardly quarrel with Berkeley when he says that we could not act with any confidence on this basis. The cool calculation of consequences seems a plausible procedure, I think, only to those who haven't tried it.

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[10] *P.O.*, sec. 8.

Again, Berkeley is right, I believe, in holding that it is easier to decide whether an act is or is not in conformity with a rule than whether it will or will not contribute to the well-being of mankind.

I must confess that I am not altogether sure about this and am still subject to doubt. I am quite impressed with the human ingenuity displayed in the process of interpreting or applying rules. I am awed, even overawed, by the powers of casuistry. But in the end it must be admitted that it is easier to classify or subsume than to predict and evaluate, and that, I think, is what this point comes to. With all its difficulty, it is still easier to determine, for example, whether an act is "constitutional" than whether it will really promote the general welfare.

The third point is perhaps more difficult, but here too I think that we have more confidence in the tendency of certain principles, if universally followed, to produce a desirable state of affairs than we can have in our particular *ad hoc* judgments. Most of our doubts arise when we are tempted to make an exception to a rule whose value we generally acknowledge. I shall return to the question of exceptions in a moment.

First I wish to mention one other point Berkeley makes in his argument for action according to rules. If each man were to follow his own best judgment, he says, we would have no sure standard by which, considering the actions of others, we can pronounce them good or bad, virtues or vices.

"The best actions," Berkeley fears, "may be condemned, and the most villainous meet with applause. In a word, there ensues the most horrible confusion of vice and virtue, sin and duty, that can possibly be imagined."[11] As a practical matter this simply means that it would be as difficult to evaluate the actions of others as it would be to make our own decisions, and that there would be considerable difference of opinion about what was praiseworthy or blameworthy. Berkeley speaks of this as a "horrible confusion"; but it is only horrible and confusing to those who enjoy organized praising and blaming. It is hard for me to see the importance of making it easier to praise and blame in a chorus; "confusion" here is a trivial aesthetic rather than a serious moral or practical consideration.

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[11] *P.O.*, sec. 10.

To come now to the matter of exceptions. We would, I suppose, call Berkeley an absolutist—he is firm against exceptions. He points out that to justify an exception we would have to be more certain about the beneficent consequences of the particular act than about the tendency of the general rule to promote the general good, and he has already denied this possibility.

We are warned against being misled by our passions. We must not, of course, succumb to the temptation to make exceptions through partiality to ourselves, to satisfy our own desires. But most explicitly we are warned also against those dangerous passions, tenderness and benevolence. Of these Berkeley says: "... they are passions rooted in our nature, and, like all other passions, must be restrained and kept under, otherwise they may possibly betray us into as great enormities as any other unbridled lust. Nay, they are more dangerous than other passions, inasmuch as they are more plausible, and apt to dazzle and corrupt the mind with the appearance of goodness and generosity."[12]

In making no exceptions we are to imitate God. For God, says Berkeley, governs the world by laws and rules and He makes no exceptions. Sometimes the operation of these laws brings us floods, earthquakes, plagues. A good Prince who falls over a cliff still falls like any other falling body and is not permitted to float gently to earth because he may be badly needed. God governs inexorably according to rules; and in our small way we should do the same.

"No private interest," he says, "no love of friends, no regard to the public good, should make us depart from [the rules].... He who squares his actions by this rule can never do amiss, though thereby he should bring himself to poverty, death, or disgrace: no, not though he should involve his family, his friends, his country, in all those evils which are accounted the greatest and most insupportable to human nature."[13]

Harsh as this may sound, Berkeley reminds us that the case for exceptions is not an easy one to make. If we assume that the rule represents our best judgment about how to promote the general welfare, how can we justify departure from the rule? To play favorites and give greater weight to our own well-being or that of our friends than to that of mankind impartially and generally considered? These are the usual reasons and they are not very good ones.

Of course, we need to know more about these rules. Berkeley, unfortunately, does not spend much time telling us how these rules, which he calls, traditionally enough, the Laws of Nature, are known or discovered.

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[12] *P.O.*, sec. 13.
[13] *Ibid.*

> . . . the law of Nature [he says] is a system of such rules or precepts as that, if they be all of them, at all times, in all places, and by all men observed, they will necessarily promote the well-being of mankind, so far as it is attainable by human actions.[14]
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> . . . let any one who hath the use of reason take but an impartial survey of the general frame and circumstances of human nature, and it will appear plainly to him that the constant observation of truth, for instance, of justice, and chastity, hath a necessary connexion with their universal well-being; that, therefore, they are to be esteemed virtues or duties; and that "Thou shalt not forswear thyself;" "Thou shalt not commit adultery;" "Thou shalt not steal;" are so many unalterable rules, which to violate in the least degree is vice or sin.[15]

I shall not stop to discuss the complex issues associated with the tradition of Natural Law. It is enough here to note that for Berkeley there is a body of rules which if universally followed will produce the well-being of mankind, and that these rules can be discovered or discerned or at least recognized by any reasonable being willing to take "an impartial survey of the circumstances and frame of human nature." But he has no "methodological" light to shed at this point.

Berkeley's only concern in the essay on passive obedience is to argue that "Thou shalt not resist the supreme power" is such a rule. And his argument, if it can be called that, is not very complicated. He simply assumes that the only alternative is anarchy or the "state of nature" and describes the horrors of that condition.

We all know Hobbes's famous description of the condition in which the life of man is "solitary, poor, nasty, brutish, and short." Here is Berkeley's version: ". . . no politeness, no order, no peace, among men, but the world is one great heap of misery and confusion; the strong as well as the weak, the wise as well as the foolish, standing on all sides exposed to all those calamities which man can be liable to in a state where he has no other security than the not being possessed of anything which may raise envy or desire in another . . ."[16] "One great heap of misery and confusion"! Even Berkeley's great literary gift seems to desert him as he contemplates the horrible face of anarchy.

The remedy for this condition is "submission to the supreme civil authority" wherever placed in any nation. "The least degree of rebellion is," he says, "with the utmost strictness and propriety, a sin."[17] The rule of passive obedience is thus presented as one of the laws of nature—political obligation simply a part of our general moral obligation.

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[14] *P.O.*, sec. 15.
[15] *Ibid.*
[16] *P.O.*, sec. 16.

Berkeley's positive argument, then, is that self-love, our concern with our eternal happiness, requires that we do our duty which, according to God's will, is to promote the well-being of all mankind; that this is to be done by a strict adherence to rules which have a necessary connection with mankind's well-being; and that "Do not resist the supreme civil power" is such a rule. After laying this down, Berkeley turns to meet some of the chief doctrines urged in favor of a right to rebel or resist.

The first position to be considered is one still familiar and often uncritically held—that "the law of self-preservation is . . . the very first and fundamental law of nature," or that the right of self-preservation overrides all other duties or obligations, including any obligation to obey the supreme civil authority.[18]

Berkeley attempts to dispose of this position by distinguishing two senses of the phrase "law of nature": (1) a *"law of nature"* as "any general rule which we observe to obtain in the works of nature, independent of the wills of men," and (2) a "law of nature" as "a rule or precept for the direction of the voluntary actions of reasonable agents."[19]

It is proper, Berkeley holds, to speak of "duty" only in connection with the second of these senses. For example, if it is a law of nature in the first sense that "water seeks its own level," it would not be correct to say that water has a duty to seek its own level. But if the precept "Tell the truth" is a law of nature in the second sense, then it would be correct to say that a man has a duty to tell the truth.

"Self-preservation," Berkeley holds, is a law of nature only in the first sense. That is, there is only a tendency, not a duty or a right, to preserve oneself.

"I grant," he says, "it is a general law of nature that in every animal there be implanted a desire of self-preservation, which, though it is the earliest, the deepest, and most lasting of all, whether natural or acquired appetities, yet cannot with any propriety be termed a moral duty."[20]

The conflict, then, between self-preservation and obedience is not a conflict between opposing duties or obligations in which self-preservation is a first, or higher, or overriding right or duty. It is a conflict between a duty and a tendency, like, for example, a conflict between a duty to stay awake when on sentry duty and a natural tendency to fall asleep when tired. If the tendency to fall asleep carries the day, we would not say, I suppose, that the duty to stay awake was cancelled by the right or duty to fall asleep.

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[17] *Ibid.*
[18] *P.O.*, sec. 33.
[19] *Ibid.*
[20] *Ibid.*

There is no precept "Preserve yourself" in Berkeley's list of rules which if universally followed would produce the well-being of mankind—no duty or right of self-preservation. There is only a tendency, a desire, a passion which like avarice, or tenderness, or any other, must be "restrained and kept under" if it is in conflict with duty.

In supposing that this is possible, Berkeley parts company with those who would hold that the desire to preserve oneself is so strong that it is in fact impossible to ignore or override, and that since we can have no obligation to do the impossible, we can have no obligation to do what is contrary to our "preservation." But the desire for self-preservation is, for Berkeley, a desire that can be disciplined. We can, he thinks, do our duty in the face of it.

As for the view that self-preservation is the highest "end" to which the system of rights and duties must be directed or subordinated, Berkeley would simply hold that this is a shortsighted substitution of prolonged temporal existence for eternal happiness, that anyone in his right mind would prefer eternal happiness and for its sake would do his duty even when it involved his own temporal destruction. This, I suppose, is a perfectly satisfactory answer for those who believe that they will be made either eternally happy or eternally unhappy.

After thus disposing of "self-preservation" Berkeley again attempts to deal with those who argue that our duty of nonresistance is limited by our duty to promote the public good. His chief point, you will recall, is this: "In framing the general laws of nature, it is granted we must be entirely guided by the public good of mankind, but not in the ordinary moral actions of our lives. . . . the rule is framed with respect to the good of mankind; but our practice must be always shaped immediately by the rule."[21] I shall not repeat his arguments against exceptions or his attempt to show that "nonresistance" is one of the rules.

There is, however, one argument of which Berkeley seems rather proud and which might be of passing interest to students of casuistry or constitutional construction. He attempts to apply to this situation a casuistic or interpretive rule to the effect that negative rules must be strictly construed.

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[21] *P.O.*, sec. 31.

Berkeley is not very clear or explicit about what a negative rule is. For example, when he writes on this point he refers to the "duty of non-resistance" or the rule "do not resist the supreme power." Elsewhere he speaks of this as the "duty of passive obedience." He apparently means by a negative rule a prohibition like "Thou shalt not kill." "Obey the supreme power," or even "Obey the supreme power or accept the punishment," would seem to be a positive rule, but for purposes of this argument Berkeley gives it a negative form, that is, he speaks of the duty of nonresistance, and sets up a possible conflict between the positive duty of "promoting the public good" and the so-called negative duty of "non-resistance." His point is that in such situations, where a particular act would seem to be an instance of promoting the public good and also an instance of a violation of the rule of "non-resistance," we must forego acting on the positive rule in order to conform to the negative rule.

A similar situation would be a conflict between, for example, a "duty to promote national security" and a duty "not to abridge freedom of speech." If a particular act could be conceived which would both promote national security and abridge freedom of speech, the application of Berkeley's casuistic rule would give priority to the force of the prohibition or negative rule.

Since I have often wished that the Supreme Court would take this view, I read Berkeley with some sympathy at this point. However, though I believe there is a place for rules of interpretation or casuistic conventions in the construing of documents, I must add that a general appeal to such a convention seems of little weight in determining in general whether the duty of obedience overrides the duty of promoting the general welfare.

Berkeley's approach to the question of whether an individual is justified in rebelling if in his judgment the public good would be promoted thereby, by placing the main stress on the question of action according to rules rather than according to particular judgments misses, I think, the main point. That is, whether when one is a member of a political community he has a right to act on his private judgment about what the public good requires when that private judgment conflicts with the "public judgment" as expressed through its authoritative decision-making institutions. Berkeley does not deal with the question in this form, and in this form the question is still with us.

The final general position justifying rebellion which Berkeley attempts to meet is, I think, the most important of all. It is the position that whatever authority the supreme civil authority, or sovereign, possesses is limited in one way or another—whether by the existence of a "higher law" or "higher authority" or by the terms of the grant of authority. Subjects are obliged to obey "authorized" acts or laws but have no obligation to obey laws or to respect acts which are "ultra vires" or exceed the limits of authorization.

In attempting to meet this position Berkeley takes cognizance of the existence of theories of social contract. He distinguishes two versions of this doctrine.

First, "that several independent persons, finding the insufferable inconvenience of a state of anarchy, where every one is governed by his own will, consented or agreed together to pay an absolute submission to the decrees of some certain legislative, which, tho sometimes they may bear hard on the subject, yet must surely prove easier to be governed by than the violent humors and unsteady opposite wills of a multitude of savages." With this version of the contract, since it involved "absolute submission," Berkeley would have no special quarrel. "In case we admit such a compact to have been the foundation of civil government," he says, "it must even on that supposition be held sacred and inviolable."[22]

As for any other version, involving conditional or limited submission or obedience, Berkeley says that unless this can be shown to be "an express known part of the fundamental constitution of a nation, equally allowed and unquestioned by all as the common law of the land," or if not, that it can be shown "at least necessarily implied in the very nature or notion of civil polity"—and he is sure that neither can be shown,—"the doctrine . . . ought to be rejected with detestation; . . . to speak of a conditioned, limited loyalty, and I know not what vague and undetermined contracts, is a most effectual means to loosen the bands of civil society, than which nothing can be of more mischievous consequence to mankind."[23]

But while Berkeley criticizes only one version of the contract theory he really has little use for the whole business. Our duty to obey does not, for him, rest on agreements or contracts or acts of authorization.

At the same time, however, Berkeley does not hold that the authority of the supreme civil power is unlimited. He grants, for example, that "no civil power hath an unlimited right to dispose of the life of any man."[24] And he recognizes that the sovereign might improperly command a subject to do something contrary to a moral law or law of nature. But in these cases Berkeley holds his ground: either obedience or "patient suffering and non-resistance for conscience' sake."[25] It is not that tyrants are entitled to our obedience. "They are," he says, "the worst and vilest of men, and for their own sakes have not the least right to our obedience. But the laws of God and nature must be obeyed, and our obedience to them is never more acceptable and sincere than when it exposeth us to temporal calamities."[26]

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[22] *P.O.*, sec. 22.

[23] *P.O.*, sec. 24.

[24] *P.O.*, sec. 37.

Our obedience is owed to God, not to the tyrant; and the fact that a tyrant may violate a moral law is no excuse for our doing so. Berkeley suggests, however, that it is not illegitimate to hope, if we are ruled by a tyrant, that God may "call him out of the world by sickness, accident, or the hand of some desperate ruffian . . ."[27] I am, I confess, intrigued by the notion of the timely intervention of a hoped-for desperate ruffian.

On the whole, Berkeley seems distinctly uneasy when confronted with the question of the exceeding of authority or of legitimate authority. He is nervous about the unsettling effects of talk about "conditioned loyalty" and vague and undetermined contracts. He shies away from the problems of legitimacy, and in a letter to Percival there is the suggestion that he is doubtful about the value of the distinction between kings *de facto* and kings *de jure*. All this is understandable in a situation in which there are newly established kings and still hopeful pretenders on the scene. Raising questions of legitimacy seldom helps the dust to settle. It is obvious that the discussion of this aspect of the problem is involved in current controversy in a way that the discussion of the public good and self-preservation are not.

Berkeley's final task in his essay on passive obedience is to attempt to allay the fear that the general acceptance of his doctrine would tend to increase the oppressiveness of government. There is a parallel with Locke's Second Treatise. After Locke defends the right of rebellion against tyrants, he turns to consider whether this hypothesis "lays a ferment for frequent rebellion," and he argues that the general acceptance of his view would not breed constant turmoil.[28] So Berkeley, denying Locke's position, turns to argue that his own view would not increase the tendency to, or the evils of, tyranny. The details I shall skip.

Running throughout his account is the basic assurance expressed in these words: "God therefore hath appointed a day of retribution in another life . . . We should not therefore repine at the divine laws, or show a frowardness or impatience of those transient sufferings they accidentally expose us to, which, however grating to flesh and blood, will yet seem of small moment, if we compare the littleness and fleetingness of this present world with the glory and eternity of the next."[29] This, then, is Berkeley's case for passive obedience, for his uncompromising denial of the right under any circumstance to rebel or revolt or to resist the supreme civil power.

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[25] *P.O.*, sec. 40.
[26] *P.O.*, sec. 39.
[27] *P.O.*, sec. 47.
[28] Locke, *Second Treatise of Civil Government*, secs. 224 ff.

I do not suppose that in this country today even the most dogmatic opponents of the right to revolt would quite share Berkeley's sweeping views. Those who seem most eager to deny to Americans not only a right to revolt, but even a right to advocate the doctrine of the necessity or desirability of revolution, also seem quite willing to encourage others—Russians or Chinese, for example—to revolt, and I do not suppose that they think they are thereby urging others to act immorally.

There is, as we know, little discussion of this issue today; but if we can infer a theory from our behavior it would seem to be one which, contrary to Berkeley's views, would hold that there is a right, perhaps even a duty, to revolt under some circumstances.

This, I suppose, is implicit in the statement by the late Chief Justice of the United States, Mr. Justice Vinson, when, writing for the majority of the Supreme Court in the Dennis case, he said: "Whatever theoretical merit there may be to the argument that there is a 'right' to rebellion against dictatorial governments is without force where the existing structure of government provides for peaceful and orderly change."[30]

The existence of a right to revolt is here made to turn upon a quality of the structure of government. What that quality is—whether its "adequate provision for peaceful and orderly change," or its adequately representative character, or its basis in consent—does not concern us here. The point is that we tend to regard the right to revolt as contingent upon the character of government. Unlike Berkeley, for whom obedience to government is a matter of conformity to God's will, we would, or at least I would, regard both the duty to obey and the right to revolt as rooted in something more mundane and parochial.

To those who may feel that advice to follow the rules come what may, to beware of tenderness and benevolence, to suffer tyrants patiently, marks a cold and unsympathetic or harsh spirit, I must hasten to say that this is really not the case with Berkeley. He was a man of deep and abiding concern for his fellows, of genuine tenderness, of a generous and genial frame of mind. He was distressed by the suffering, poverty, and joylessness he saw about him. He was full of projects for the improvement of the quality of life. He was not easily discouraged, but as he grew older he expressed increasing fear for the "corrupt and degenerate age" in which he lived. He says:

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[29] *P.O.*, sec. 42.

[30] 341 US 494 (1951).

> I know it is an old folly to make peevish complaints of the times, and charge the common failures of human nature on a particular age. One may nevertheless venture to affirm that the present hath brought forth new and portentous villainies, not to be paralleled in our own or any other history. We have been long preparing for some great catastrophe. Vice and villainy have by degrees grown reputable among us; our infidels have passed for fine gentleman, and our venal traitors for men of sense, who knew the world. We have made a jest of public spirit . . . instead of blushing for our crimes we are ashamed only of piety and virtue . . . other nations have been wicked, but we are the first who have been wicked upon principle.[31]

Throughout the rest of Berkeley's political and moral writings these themes appear with overtones of increased foreboding—the lack of public spirit and the destruction of public spirit by pernicious theories, by a neglect of the religious foundation of social life.

In his early essay on passive obedience, Berkeley hardly speaks of the fear of God. "Who sees not," he confidently says, "that every reasonable man ought so to frame his actions as that they may most effectually contribute to promote his eternal interest?"[32] But later he is to speak less of reasonable men and more in this vein:

> Man is an animal formidable both from his passions and his reason; his passions often urging him to great evils, and his reason furnishing means to achieve them. [The task is] to tame this animal, and make him amenable to order, to inure him to a sense of justice and virtue, to withhold him from ill courses by fear, and encourage him in his duty by hopes; in short, to fashion and model him for society . . .[33]

> . . . strip men of these their [socially acquired] notions, or, if you will, prejudices [note this], with regard to modesty, decency, justice, charity, and the like, you will soon find them so many monsters, utterly unfit for human society.[34]

"Monster" is a word used more than once by Berkeley. He scoffs at the popular notion of the "noble savage." What is esteemed in those creatures, he says, "is not innocence, but ignorance . . . Give them but the means of transgressing, and they know no bounds."[35]

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[31] *An Essay towards Preventing the Ruin of Great Britain,* Luce and Jessop's edition of Berkeley's *Works*, Vol. VI, p. 84.

[32] *P.O.*, sec. 6.

[33] *A Discourse Addressed to Magistrates and Men in Authority,* Luce and Jessop's edition, Vol. VI, p. 202.

[34] *Ibid.*, p. 204.

As he contemplates an age which, as he thinks, has made a jest of public spirit and which respects men "who bend and wrest the public interest to their own private ends" he comes to stress the fear of God. And he writes:

> Obedience to all civil power is rooted in the religious fear of God . . . This makes men obey, not with eye-service, but in sincerity of heart. Human regards may restrain men from open and penal offences; but the fear of God is a restraint from all degrees of all crimes, however circumstanced. Take away this stay and prop of duty, this root of civil authority; and all that was sustained by it or grew from it shall soon languish.[36]

"Tully hath long since observed," he says, " 'that it is impossible for those who have no belief of the immortality of the soul, or a future state of rewards and punishments, to sacrifice their particular interests and passions to the public good, or have a generous concern for posterity,' and our own experience," he adds sadly, "confirmeth the truth of this observation."[37]

It is not unexpected, then, when Berkeley says:

> Deliberate, atheistical blasphemy is of all crimes the most dangerous to the public, inasmuch as it opens the door to all other crimes, and virtually contains them all; a religious awe and fear of God being . . . the center that unites, and the cement that connects all human society. He who makes it his business to lessen or root out from the minds of men this principle doth in effect endeavour to fill his country with highwaymen, house-breakers, murderers, fraudulent dealers, perjured witnesses, and every other pest of society.[38]

There is, I think, no need to multiply quotations.

I find myself going some distance with Berkeley, although I would not take what he would regard as the indispensable step. I think he is right in seeing the importance of duty and of public spirit—the disinterested concern for the public interest. This, too, is an age whose theorists at least have made a jest of public spirit and stigmatized duty as a dangerous and misleading notion. Other ages have been more corrupt, but few have made as systematic an attempt on theoretical grounds to dispense with the concepts of "duty" and "public interest" and to replace them with private interests and machinery as the basic elements in the theory of our political life, few have been as insanely and irresponsibly "individualistic."

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[35] *Ibid.*, p. 207.
[36] *Ibid.*, pp. 208–209.
[37] *An Essay towards Preventing the Ruin of Great Britain*, p. 79.
[38] *Discourse to Magistrates*, p. 219.

Berkeley saw, correctly, I believe, that there is no substitute in political life for public spirit, for the sense of duty, for the person who will do something simply because it is his duty or responsibility. He brooked no nonsense about "invisible hands" arranging a "natural harmony of interests," about private vices producing public benefits, or about how each person serves the public interest best by turning from it to pursue his private interests.

Nor did he fall into the opposite error of supposing that nothing more was needed than good-will, altruistic feeling, and benevolence. He was no sentimentalist. He did not suppose that kindness was an adequate substitute for a sense of duty.

In these respects I think he was right. This is not to say that we should neglect all devices by which the clash of interests may be made to bear useful public fruit, or that in our educational activity we should not encourage the cultivation and development of generosity, sympathy, and good-will. But however successful we are likely to be in these directions, there will always remain crucial areas in our political life which demand deliberate, disinterested action as a matter of duty.

I am sure there are many who would not agree; but I cannot stop to argue the issue here. Thus far, in any case, I agree with Berkeley.

But the basis of duty, the question of its necessary religious foundations, is quite another matter.

It is hardly necessary to point out that Berkeley's position is, in one form or another, still widely held today. We are constantly being told, not only by religious spokesmen but by high public officials, that our democracy is based on a belief in, or fear of, God, that an atheist cannot be a good citizen, that only the God-fearing can be trusted, that the whole structure of rights and obligations rests on the foundation of religious belief. I do not think our political life rests on such slender foundations; but I do not intend to try to shake those supposed foundations in the time remaining to me on this occasion.

The range of belief and attitude which lays claim to the term "religious" is, of course, very wide, and includes views which do not in any discernible way bear on the question of the performance of duty. Hume's Demea is of little use here, nor are the mystics of whom Professor Stace recently spoke in his Howison address. I am afraid that the religious views which are relevant are those which Professor Stace dismissed as "popular religion," or which many religious people themselves dismiss as mere anthropomorphism—that is, views of God which conceive of Him as commanding, rewarding, or punishing. This is the sort of view which Berkeley relies on and expresses, and the only sort that is relevant. I do not think it is legitimate for those who accept or defend a religious view of the universe only in some "higher" or "subtle" sense to revert to a popular anthropomorphism when it comes to morals or politics.

Whoever shares Berkeley's religious views has, no doubt, or believes he has, a reason for doing his duty—that is, a hope of reward or a fear of being punished. To say, however, that there can be no other basis than this is simply to say that one cannot imagine himself doing his duty except to win a reward or to avoid punishment. This is an interesting confession. But it has always puzzled me that this should be regarded as an "exalted" view of things as compared, for example, with a merely temporal materialism.

I do not share the view that men are monsters who can only be made to behave by bribery and intimidation. They are animals who have invented the conceptions of rights, duties, responsibility, and even dignity. These are purely human creations, our most significant political artifacts, and they have nothing to do with hope and fear. They are in fact antithetic. He who acts through fear or hope of reward is not in any significant sense a respecter of rights or duties, a bearer of responsibility. He does not have dignity. And that is why Berkeley's position will never be the last or best word in political philosophy. Apart from other considerations, it lacks dignity.

Despite all this, however, Berkeley himself remains, to my mind, an attractive figure. He is simple, honest, and deeply concerned about the good of others. He has wit, charm, and imagination—although his ingenuity and originality seem to have exhausted themselves in other directions than political philosophy. And in the warmth and fervor of his social criticism there is something of the flavor of a prophet of old.

Berkeley is, if such things are conceivable, a sort of cool Irish Rousseau or an Irish Dostoevski. He shares with them a common significant experience. They are to be numbered among the country boys of the world—the gifted, brilliant provincials who come to the big city and are quickly caught up in the leading circles of "enlightenment" and sophistication; who retain their childlike clarity, grow aware of the moral nakedness of the kings of the coffeehouses, of hypocrisy and shallowness, become alienated from the leaders of intellectual fashion, the "vulgar who drive in coaches," and fall back into the traditional prophetic role—denouncing both the wickedness they think they see and the new "principles" and theories which seem to them to lead to disaster.

This, I believe, was the significant, dominating experience of Berkeley's life. It is the Berkeley, formed by this experience, who expresses himself in these moving words: "God grant the time be not near when men shall say: 'This island was once inhabited by a religious, brave, sincere people, of plain uncorrupt manners, respecting inbred worth rather than titles and appearances, assertors of liberty, lovers of their country, jealous of their own rights, and unwilling to infringe the rights of others; improvers of learning and useful arts, enemies to luxury, tender of other men's lives and prodigal of their own; inferior in nothing to the old Greeks or Romans ... Such were our ancestors during their rise and greatness; but they degenerated, grew servile flatterers of men in power, adopted Epicurean notions, became venal, corrupt, injurious, which drew upon them the hatred of God and man, and occasioned their final ruin.' "[39]

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[39] *An Essay towards Preventing the Ruin of Great Britain,* p. 85.

BERKELEY'S "DE MOTU"—AN ANTICIPATION OF MACH

JOHN MYHILL

IN BERKELEY'S world, as is well known, there are two kinds of entities: ideas, which are passive; and spirits, which are active. The existence of an idea consists in its being perceived by a spirit; the existence of a spirit consists in its perceiving ideas. In addition to this, spirits have volition or power, while ideas, as we said, are passive and have no power.

In consequence of this ontology Berkeley strikes a twentieth-century mind as a strange combination of empiricist and mystic, or rather magician. The study of natural phenomena is to be purged, on Berkeley's philosophy, of all metaphysical elements, in short, of everything which is not perceived by the senses. For example, physical forces are not to be hypostatized as existing in themselves; matter as an unperceived substratum of what is perceived is to be rejected as a fiction; and in general much the same criteria of meaningfulness are applied to natural science as are applied by the Viennese positivists of our own day. For Berkeley's "ideas" are nothing but what are today called sense data or images; a scientific concept is meaningless unless it can be presented by images, and a scientific law is false unless it can be verified by sense data. If we stress the ideas in Berkeley's philosophy, therefore, he emerges as a precursor of the Vienna circle. Most of my paper is devoted to this topic.

On the other hand, it would give a one-sided picture of Berkeley if we were to concentrate on his ideas and ignore his spirits. A spirit, as we said, is an active substance which is not perceived, but itself perceives; the best-known example of a spirit is one's own mind. Since a spirit is not perceived, the problem arises how one can know anything about spirits. On Berkeley's philosophy one can have no idea of a spirit. How then is knowledge of spirits possible? Berkeley says that they are known by notions rather than ideas, and by the *intellectus purus* rather than by sense or imagination. How far this is more than a verbal explanation, and how far it is compatible with Berkeley's principles to assert that one can know anything otherwise than by ideas, would be a subject for another paper. We might mention that for Locke this problem does not arise, since it is quite possible for one to have an idea of one's own mind in Locke; in Hume the problem does not arise either, since one has no mind to have an idea of. That one has no idea of any mind, not even one's own, and that at the same time one contrives to have knowledge of a great many minds, including God's, may strike one as an uncomfortable feature of Berkeley's halfway position in this regard; but as we said, to discuss this matter more fully would take us too far from our central topic.

Let us consider further, however, Berkeley's doctrine of spirits; for it will turn out to play an essential part in his theory of motion. Knowledge of spirits and their qualities is not through the senses, and is therefore not subjected to the positivistic criticism which Berkeley reserves for scientific knowledge. From observing the behavior of other human beings, we learn that they have minds or spirits of their own, characterized by perception and will. Likewise from observing the behavior of the sensible world as a whole, we learn that it is animated by a perceiving and willing spirit, which is God. The knowledge of these spirits, both finite and infinite, is not to be criticized positivistically, for Berkeley's positivism applies only to ideas and not to spirits.

It will be seen that this doctrine makes for a rigorous distinction between the natural sciences on the one hand, and metaphysics and theology on the other. If natural science is to deal only with ideas, it can have no relevance to metaphysics, the science of spirits; therefore arguments drawn from natural science are powerless against the Christian religion. It was therefore in Berkeley's interest, from a theological point of view, to render science completely free from metaphysical presuppositions. Indeed, even in his most empirical works he frequently makes it clear that he regards his reasoning as directed against freethinkers. One can be reminded, in this connection, of the recent rather uneasy alliance between Catholics and positivists in France, whose motivation was entirely similar. The physical sciences are to be shown their place in no uncertain terms; but this does not imply that they should be rejected.

To complete this preliminary account of Berkeley's general position, we should not omit mention of what we described above as his magical tendencies; for the doctrine of spirits, once freed from the necessity of verification by sensory experience, went far beyond orthodox Christianity and claimed its roots in a much older tradition. The *Siris* was regarded by Berkeley as the cornerstone of his system; and the *Siris,* which in no way regards itself as contradicting Berkeley's earlier empirical writings, is permeated through and through with alchemy and magic. The doctrine of God's manifestation of himself in all things, which was beforehand rather a vague and general thought not essentially at variance with orthodox Christianity, becomes now rather specifically magical; there are what I take to be lower gods or spirits, as the Three Hypostases, the Fire-Principle, and the Anima Mundi, through which this manifestation is accomplished. In different sensory objects, moreover, these spirits are manifested in different degrees—the Fire-Principle manifests itself more in mercury than in lead, more in pine than in oak, and so forth. I take this specificity and concreteness of divine action, and the total absence of reference to supernatural experience, to mark the later Berkeley as a magician rather than a pantheist or mystic.

Latter-day adepts, indeed, have never scrupled to count Berkeley of their number. They regard his more empirical works as an invaluable propaedeutic to magic, much, I would say, as he did himself. The *Three Dialogues* have long been recommended reading for theosophists. If we have understood the manner in which the Theory of Ideas keeps natural science within bounds where it cannot touch metaphysics or theology, we shall no longer find any mystery in the alliance of positivism with theosophy.

One might scruple to accept my earlier remark that the doctrine of spirits is "freed from the necessity of verification by sensory experience"; for it cannot be doubted that Berkeley regarded the details of his esoteric doctrine as substantiated in large part by the evidence of the senses. However, there is a great difference between the verification of his magical doctrine and the verification of physical hypotheses. The forces dealt with by physics have no real existence; they are merely convenient summaries of observed facts. Empirical science is *nothing but* the description of our experience. The supernatural spirits of metaphysics, however, are real active existents and not hypotheses. And it is logically impossible that *they,* as spirits, should be perceived by the senses. Metaphysics is the description of the *causes* of our experience, which cannot themselves be experienced.

This concludes my preliminary description of Berkeley's philosophy as a whole. I wish now to explain the place of the Latin treatise *De Motu* in this philosophy. One is perhaps inclined to regard Berkeley, in the light of the *Analyst* controversy, as an opponent of Newton. But this extends only to certain specific points. Time and again Berkeley assures us that Newton's was incomparably the greatest advance in *natural* philosophy ever made; and I detect no irony in his tone. Nor must we suppose that natural science was relegated by Berkeley (as it was by later idealists) to the level of "appearance" or that in any sense it was claimed to be "less true" than, for example, religion. Berkeley's world consists of ideas and spirits; physics is the knowledge of ideas, and metaphysics is the knowledge of spirits; both are equally true and there is no contradiction between them. Natural science is only false or meaningless if one of the following three things takes place: first, if it trespasses on metaphysics (as it does if it attempts to deal with cause in any nonphenomenalistic sense); second, if it uses meaningless concepts referable neither to spirits nor to ideas (as it does if it discourses of absolute space or a material substratum); third, if it contradicts the rules of sound reasoning (as in Newton's formulation of the differential calculus). (Metaphysics is on occasion *beyond* reason, but it is never *against* reason.) Berkeley's motivation in the *De Motu* and the *Analyst* alike is to show how the real content of Newton's *Principia* (i.e., its empirical content) can be preserved without the intrusion of metaphysical notions (as cause), meaningless notions (as material substance), or logical contradiction (as infinitesimals). He has no intention to disparage Natural Science, or to belittle Newton's achievement; as Mach said of his own *Mechanik,* "Ihre Tendenz ist vielmehr eine aufklärende oder, um es noch deutlicher zu sagen, eine antimetaphysische"—its tendency is rather clarificatory, or, more precisely speaking, antimetaphysical. One must reckon, however, with this essential difference between Berkeley and Mach: for Berkeley there is a distinction between metaphysical notions (as cause) and meaningless notions (as material substance); in fact the two categories are mutually exclusive. For Mach, on the other hand, the terms "metaphysical" and "meaningless" are synonymous. However, so far as mechanics goes, the notions which are regarded as metaphysical *and* meaningless by Mach are precisely those which are regarded as metaphysical *or* meaningless by Berkeley; and both authors agree that all such notions should be eliminated from mechanics, leaving, however, its experiential content untouched.

The treatise *De Motu* was published in 1721, after the publication of the *Principles* and *Dialogues,* but before the *Analyst.* It is therefore its author's first venture into the detailed criticism of natural science; his doctrines that there exist mental power and substance, but no material power or substance, are by now well formed. I quote Fraser's brief summary of the treatise:

> Abstraction and misuse of language . . . mystify . . . our notion of Power. The notion is referred to our consciousness of personal activity or volition—the only

> example in our experience of a Cause properly so called... Activity belongs to *minds* or *persons* exclusively; and... the supposed relation of Causation among sensible things is really one of Sign and Signification, not of Cause and Effect. The movements of the material world are thus a natural language, originating in, and inspired by, Supreme Mind.

This is a good enough summary of one aspect of the *De Motu,* namely, the metaphysical. That the real metaphysical relation of Cause only exists between mind or spirit and phenomena or ideas, and in particular therefore between God's mind and the play of phenomena in the entire sensible world, is of course a basic tenet of Berkeley's metaphysics before, in, and after the *De Motu.* And from this it follows that in this sense there is no causation between one sensible object and another. But it might be gleaned from Fraser's summary that Berkeley's attitude to natural science was hostile, and that he regarded it as based upon an error, namely, the existence of physical causation, and for that reason to be rejected. As we have already seen, and as we shall see further when we come to analyze the *De Motu* in detail, this was not remotely Berkeley's position. It was not in natural science itself, but in Newton's metaphysical superstructure, that Berkeley claimed to find verbal confusions, philosophical errors, and pseudo-concepts used to answer pseudo-questions. In a nutshell, it was the scholia rather than the theorems of the *Principia* which he rejected. Now it is today one of the standard problems of positivistic analysis to provide an account of physics which is through-and-through empirical and without metaphysical presuppositions. This is precisely Berkeley's *critical* task in the *De Motu.* And of this task, or of the ingenuity with which Berkeley performed it, I am afraid Fraser's summary gives no hint.

The treatise with which we are concerned thus shares the two-sided nature of its author's whole philosophy. On the one hand, motion is taken as an expression of the Divine volition, and its regularity as an expression of the Divine constancy; on the other, the greatest possible care is taken to avoid intruding these or any other metaphysical notions into the *scientific* description of this regularity. Our interpretation of the relation between these two sides of the *De Motu* is confirmed by the last section of that work:

> In truth, it is by meditation and reasoning alone that active causes may be removed from the mystery which surrounds them, and to a certain extent understood. Their treatment belongs to first philosophy, or metaphysics. If to each science were given its own province, if limits were assigned, and the principles and objects of each [science] were accurately distinguished, it would be possible to deal with [active causes] with greater ease and clarity.

So much for the general purpose of the *De Motu,* and for its place in the philosophy of its author. We turn now to a brief outline of the work.

Its full title is: *De Motu, sive de motus principio et natura et de causa communicationis motuum.* It falls, after a brief introduction on abuse of general names, into three sections, corresponding precisely to the three subheadings of the title: the *principle* of motion, the *nature* of motion, and the *cause of communication* of motion.

First, then, the principle of motion. Such words as "force," "gravity," "attraction" have commonly been used to describe this principle. Berkeley points out that in our sensory experience of bodies there are only two features which could conceivably be called by these names: our experience of pressure, strain, tension, etc., as a feeling in ourselves, and our observation of mathematically predictable behavior in bodies. ("Body," by the way, "corpus," here means "body as given in sense perception," "idea of body"; not "material substratum.") For example, in the case of gravity, we "feel" the heaviness of a body (that is, we feel a certain pressure when we hold a heavy body in our hands: this feeling is, however, in us, not in the body); we also observe that bodies move (not "are attracted"—this is an interpretation) toward the center of the earth, and this moreover with mathematically predictable regularity. This experience of, on the one hand, pressure, and on the other hand, regular motion predictable by mathematical laws is the sole empirical content of the notion of gravity. The word "force" is similarly analyzed. Now how, argues Berkeley, can one speak of gravity or force as the principle or in any sense as the cause of motion? One surely cannot mean that our sensation of pressure when we hold a heavy object is the cause of its descent to the earth when we release it. On the other hand, to explain its descent as the effect of force or gravity in the other sense—that is, as the effect of the fact that the body exhibits certain regularities in its motion—is to explain a thing by itself, or by a *qualitas occulta* or dispositional property—it falls because it has a disposition to fall. Yet beyond these two meanings of "force" or "gravity" nothing pertinent is given to the senses.

"Force, gravity and suchlike words," writes Berkeley, "are frequently and without impropriety used in a concrete meaning, to denote [patterns of] motion, difficulty of resisting [an object] etc. But when they are used by philosophers to denote certain natures separate from and abstracted from these, which are neither perceptible to the senses, comprehensible by the intellect, nor picturable in the imagination, error and confusion are the result."

Nonetheless, another use of the terms *is* allowed by Berkeley in several passages in this part of the *De Motu.* Namely, they *may appear in mathematical calculations.* The formulae of mathematical physics are summaries of experience. So long as we do not hypostatize the concepts of force, gravity, etc., which appear in those formulae, we have not in Berkeley's view violated any principles of methodology or metaphysics. The kinship to Quine and Nagel's variety of pragmatism, or to Mach's doctrine of the economy of thought, is evident. We shall substantiate the anticipation of Mach a little later on.

What, then, is Berkeley's account of the principle of motion, with which this first section deals? According to him, the question "What is the principle of motion?" has three senses. (*De Motu,* par. 37.) In one sense (principle in the sense of metaphysical cause) the answer is "God." In another sense "the principles of experimental philosophy are those foundations upon which rests, or origins from which arises, the knowledge (not the existence) of corporeal things, namely sensation and experience." In a third sense, the principles of motion, "the basic laws of motion which are demonstrated by experiments and subsequently developed and universalized by reason. It is convenient to call these laws of motion principles, because from them are derived both general mechanical theorems and particular explanations of phenomena." In the succeeding paragraph, he defines one meaning of "explanation" as "bringing under general laws."

On the further detail of Berkeley's account of the principle or principles of motion we have not time to dwell. Suffice it to say that by reduction to experiential content he disposes of many pseudo-problems in the philosophy of physics, and that despite this the real content of mathematical physics he asserts again and again to be untouched by his criticism. We shall come back to these points later in substantiating our claim that the *De Motu* contains nontrivial anticipations of Mach.

Of course it might be held that the doctrine of the economy of thought, and the desire to leave existing natural science as far as possible untouched by criticism, were such general and basic features of empiricism that one should not be at all surprised by their appearance in the *De Motu.* However, I cannot recall to have seen them in Hume, who is usually reckoned a more consistent empiricist than Berkeley.

Any doubt of this kind about the originality of Berkeley's analysis will, however, be dispelled by a reading of the second part of the *De Motu,* "de motus natura"—on the nature of motion, and specifically on the distinction of absolute and relative motion; but the discussion soon passes to absolute and relative space. For Berkeley, of course, all motion and all space is relative. Absolute space cannot be perceived, *therefore* cannot be imagined; and the *intellectus purus,* whose domain is spirits, is likewise incapable of handling it. (Berkeley was not sympathetic to those who with Clarke would identify absolute space in whole or in part with God.) This purely philosophical argument, with its doubtful foundation of a neo-Aristotelian trichotomy of "faculties," seems a weak and flimsy thing when opposed by Newton's formidable argument in favor of absolute space, derived from a rotating bucket of water, to which even Leibniz had been incapable of finding a satisfactory answer. Berkeley had a very ingenious answer here, which I think is substantially correct. It is commonly supposed to be Mach's. Indeed, Reichenbach in his book *From Copernicus to Einstein* states categorically (p. 79), "Almost 200 years had to pass before a real refutation of Newton's thought was found"—and ascribes this "real refutation" to Mach. The "real refutation" is, however, to be found in *De Motu,* published six years before Newton's death; Newton could himself have read it. It is on the foregoing, if necessary, that I will rest my case that Berkeley's *De Motu* contains thoughts which are commonly supposed to have originated with Mach. Later, I will return to a more detailed explanation of the absolute-space controversy; meanwhile, let me complete this brief summary of the *De Motu.*

The third section, "de causa communicationis motuum"—on the cause of communication of motions,—concludes like the first with a resolution of this question into three questions. As in the first section, the *metaphysical* principle of motion was said to be God, so here he is assigned likewise the role of *metaphysical* cause of the communication of motions from one body to another. As in the first section the *physical* principle of motion was (somewhat strangely) said to be sensation, so here the "physicus, series . . . rerum sensibilium [observans]"—the physicist, observing the series of sensible phenomena—is allowed to assert in *his* sense that the case of motion of a body is the impressed motion of another body. Finally, the *mechanical* cause of the motion of a body is the laws of motion, together with certain specific motions from which, together with those laws, the given motion could have been predicted. (We must recall that Berkeley uses "physics" in the sense in which we use "empirical mechanics" today, and "mechanics" in the sense of "rational mechanics.") Berkeley's metaphysical cause corresponds approximately to Aristotle's efficient and final causes: his mechanical cause, to Aristotle's formal cause.

In this third section are to be found, as one would expect, numerous attacks on the idea that one body can communicate its motion to another in any nonphenomenalistic sense. In the course of this discussion, numerous utterances reminiscent of contemporary positivism are made; for example, that truth is a function of the describing language or coördinate system as well as of the described reality. Closely linked with this is the following striking passage (*De Motu,* par. 67): "Moreover it is obvious that force is not a certain and determinate thing; for very learned men put forth quite diverse and even contradictory theories about it, *salva tamen in consequentiis veritate*—however with no difference in [observable] consequences."

These five Latin words constitute a simultaneous anticipation of the positivistic doctrine of the relativity of language and of the verifiability criterion of meaning. The notion that a theory may be without meaning because of its lack of observable consequences is a commonplace of empiricism reaching back to Sextus and I daresay to Protagoras. But the notion that a *dispute* about two *meaningful* theories may be meaningless because the two theories do not have *different* observable consequences has a modern ring which I do not find in any other writer before Mach.

This concludes my account of the leading ideas of the *De Motu.* I now ask to what extent these ideas are also found in Mach.

To this end I list six principles expressed both in the *De Motu* and in Mach's *Mechanics,* and leave you to judge whether or not there is an anticipation.

I. The doctrine that material forces and other constructs of mechanics, though legitimately usable in mathematical deductions, do not refer to any actual existents.

> BERKELEY: "The student of mechanics uses certain abstract general terms . . . force, action . . . etc. which . . . are useful in calculations about motion—though we would seek them in vain in . . . actually existing bodies." (*De Motu,* par. 39.)
>
> MACH: "Most natural scientists ascribe to the concepts of physics (mass, force, atom) . . . an existence outside of thought . . . We must not consider [these] aids to thought as the foundation of the real world." (*Mechanik,* V, 2.2.)

It is well known that Mach did not regard the concepts of physics as in any sense part of the "real world." "Colors, tones, pressures, [sensible] spaces and times are the real elements of the world." (*Mechanik,* IV, 4.2.)

II. The doctrine that epistemological criticism leaves untouched the scientific content of theoretical physics.

> Berkeley: "The truth and usefulness of theorems of mechanical philosophy concerning the mutual attraction of bodies remains unaffected... whether we assume that that motion is caused by the mutual attraction of bodies or by the action of a non-corporeal agent." (*De Motu*, par. 28.)
>
> Mach: "The laws of nature look exactly the same whether they are stated in terms of absolute space or... without explicit mention of the [relative] frame of reference." (*Mechanik*, II, 10.4.)

III. The doctrine that experienced sensations of pressure, etc., have nothing to do with "force" as used in physics.

> Berkeley: "While we are holding up heavy bodies, we sense... an effort, fatigue etc.,... but gravity in the [physical] meaning cannot properly be called a sense-quality." (*De Motu*, par. 4.)
>
> Mach: "We must not consider [force, etc.] as the foundations of the real world." (*Mechanik*, IV, 2.2.) "Colors, tones, *pressures* [my italics]... are the real elements of the world." (*Mechanik*, V, 2.2.) From which it follows that Mach did not identify *force* in physics with (felt) pressure.

IV. The doctrine that physics describes the laws of phenomena and does not deal with their causes.

> Berkeley: "It is the business of mathematical physics to describe... not the causes but the laws of motion." (*De Motu*, par. 35.)
>
> Mach: "Natural science consists of the representation of observed facts in thought... The methods of representation are the laws of Nature." (*Mechanik*, V, 1.5.) [On the other hand] "In nature there is no cause and no effect." (*Mechanik*, V, 4.3.)

This is of course a more extreme position than that of Berkeley, who held that there were spiritual causes in nature. But it is evident that Berkeley would have agreed with Mach that there was no room for cause in physics, except in a Pickwickian sense. (Berkeley expresses this Pickwickian sense by "ratio cur phenomena fiant" in *De Motu*, par. 37; Mach uses "Kausalgesetz" in *Mechanik*, V, 1.5. Mach's "Ursache" corresponds to Berkeley's "causa" and *this* they both eliminate from physics.)

V. The doctrine of the economy of thought.

> Berkeley: "The human mind delights in extending and advancing its knowledge. To this end general notions and propositions should be formed, in which are contained particular propositions and items of knowledge." (*De Motu*, par. 38.)
>
> Mach: "It is characteristic of the more highly developed sciences to compress the representations of very many [perceived] facts into a single formula." (*Mechanik*, IV, 4.4.)

Of course, Mach's doctrine of the economy of thought is much more involved and sophisticated than Berkeley's. Nonetheless, it is of interest that both regard everyday language as illustrating this principle no less than scientific discourse. (*De Motu,* par. 7; *Mechanik,* IV, 4.1.)

VI. The doctrine that there may be equally valid yet mutually discrepant theories, which are equivalent in the sense that they have identical empirical consequences, and are therefore such that disputes over which is correct are meaningless.

BERKELEY: "Mathematical objects do not have a stable essence in the nature of things; *pendent autem a notione definientis;* for this reason the same fact can be explained in different ways."—I have left untranslated the words "*pendent autem a notione definientis*," which I find extremely obscure; that they anticipate some type of relativism can hardly be doubted, however. In connection with the word "explained" (*explicari*) in the last sentence, I would remind you of Berkeley's definition of (physical) explanation as bringing under a general law.

MACH: "By the same principle (sc. of the economy of thought) the system of a science can be deduced in several different ways. But one of these ways serves economy better than the others." (*Mechanik,* IV, 4.11.)

I take it as established by these quotations that there are numerous points of contact between the thought of Berkeley and that of Mach. Specifically, both held that theoretical physics is a construction (*fictio* in Berkeley, *Gedankending* in Mach) whose object is to explain the sense-given world, but only in the sense of bringing under general rules. Outside of physics, they differed profoundly: Berkeley held that there do exist real causal explanations, but that they belong rather to metaphysics than to physics; Mach, on the other hand, held that there exist no causes in the world at all, and *a fortiori* no causal explanations except in a Pickwickian sense (*rationes, Kausalgesetze*). Mach is almost precisely Berkeley without his spirits.

However, it may be held that these conceptions are such common coin in empiricist circles that the fact that Berkeley shared them with Mach is no cause for wonder. I venture to doubt this—from some slight internal evidence it seems that Mach's principal *philosophical* influence was Hume and that he did not value Berkeley too highly. Yet those aspects of empiricism which are shared by Berkeley and Mach are precisely those which are lacking in Hume. Roughly speaking, one can say that Berkeley had and Hume did not have a respect for natural science. Since there seems no evidence of Mach's ever having read the *De Motu,* I do not think it likely that he was either directly or indirectly influenced by those features of Berkeley's thought which are closest to his own; for they ceased to be operative during the intermediate history of empiricism. I am maintaining, therefore, that Mach *rediscovered* the philosophy of physics contained in the *De Motu*—naturally in a much more extended form.

Let us now return to the most striking example of this, namely, the controversy over absolute and relative space as it appears in Berkeley and Mach. Both of them defended relative space against Newton, who defended absolute space.

Everybody has experienced the sensation of looking from a train window and being uncertain whether the train in which he sits is moving forward or whether another train on an adjacent track is moving backward. In practice, one decides this question by looking from a window on the other side of his train (if this be possible) and observing the behavior of the landscape. If one's own train is moving forward and the other train is stationary, the landscape appears to be receding; if one's own train is stationary and the train on the adjacent track is moving backward, the landscape appears stationary. Nonetheless, one may ask how one can be certain of this. Suppose for example that one's own train, together with the whole visible landscape, were moving forward while the other train stood still. The sensible effect would be precisely the same as if the other train were moving backward while the whole landscape and one's own train were stationary. In practice, of course, no one would wish to make the assumption that the whole earth was moving past a train, this being the only thing which stood still. What is more important is that even if anyone should interpret his sensations in this matter, it would in no way affect his expectations concerning the future; for whether the other train were moving toward, say, Los Angeles at sixty miles an hour, or whether Los Angeles were moving toward the other train at sixty miles an hour, it would still be the case that after a certain number of hours and minutes the train would be in the station at Los Angeles. It would in fact be impossible to determine by any kind of experiment whether the train was moving and the rest of the world stationary, or the rest of the world moving and the train stationary. Thus the true description of motion is relative, in the sense that if one body moves toward another the only thing we can say is, for example, that body *A* is moving north at sixty miles an hour relative to body *B*, and body *B* is moving south at sixty miles an hour relative to body *A*.

Arguments of this sort were used by Leibniz, Berkeley, and Mach alike, against Newton's doctrine of absolute space and absolute motion.

According to this doctrine there exist, in addition to material objects, immaterial ones called *points of absolute space*. Every material particle occupies at any given time one of these points. If a particle occupies the same point for a period of time, it is said to be at rest in an absolute sense. If it occupies different points during a period of time, it is said, again in an absolute sense, to be in motion during that period. Thus the following three situations would on Newton's theory be different situations.

1. The body *A* is at rest in absolute space, and the body *B* is moving due south toward *A* at 60 m.p.h.
2. The body *B* is at rest in absolute space, and the body *A* is moving due north toward *B* at 60 m.p.h.
3. The body *A* is moving due north at 35 m.p.h., and the body *B* is moving due south at 25 m.p.h.; these motions lie in the same straight line.

According to the arguments of Berkeley and Leibniz, these would be three ways of describing the same situation, since there would be no empirical way of distinguishing one from the other. Berkeley would have added (*De Motu,* par. 55) that the reason that we are inclined at first to regard them as different situations is that we unthinkingly measure these motions relative to our own body, or (in the case of the train) to the earth, or finally (in the case of astronomical motions) relative to the fixed stars.

However, Newton had a powerful argument in favor of absolute space which Leibniz was unable to refute, though he was not impelled by it to change his own position. Let us return to the example of the trains. Suppose that the two trains are no longer moving on straight, but on circular tracks, and suppose it is desired to distinguish the case in which we are stationary and the other train is moving backward, from the case in which the other train is stationary and we are moving forward. Then, according to Newton, there is a sure test, as empirical as one could wish, which will distinguish these two alternatives. If our own train is moving, the wheels on the inside of the curve will tend to rise from the rails, and (assuming that the speed is sufficiently great) will actually do so; if it is the other train which is moving, no such effect will be observed. Hence, at least as far as motion in a circle is concerned, it is possible to detect it in an empirical manner, and the motion thus detected will be an *absolute* motion, not relative to the other train. If we were "really" stationary, but moving relative to the other train, the *other* train's wheels would rise from the tracks; for it would "really" be moving.

It was stated above that Leibniz had no satisfactory counterargument to this. It is claimed by Reichenbach that no such argument appears before Mach. Let us now examine Mach's argument, and then see what Berkeley says. It will appear, if I make no mistake, that Berkeley's argument is substantially the same. And it will be remembered that the *De Motu* was published in Newton's lifetime.

Mach's argument is as follows: There *is* a real difference between the case in which our train moves and the other is stationary, and the case in which the other train moves and ours is stationary; but this difference does not imply the existence of absolute motion and therewith absolute space. For in the case in which our train would normally be called stationary, our train is at rest with respect to the earth; whereas if it is the other train which is stationary, our train is *not* at rest with relation to the earth. There are therefore different *relative* motions which produce different observable effects; there is no question of absolute motion.

To remove the complications introduced into this argument by the motion of the earth, let us suppose the trains replaced by rocket ships. Effects similar to the raising of the wheels from the tracks would occur, on Newtonian principles, in two such ships circling in interstellar space; in particular, centrifugal forces would appear. Mach would in this case answer that there was again a difference between the "circling" and the "stationary" rocket ships which could account for the observable presence of centrifugal force on the former and not on the latter, and did not involve absolute space; namely, that one of the ships is, and the other is not, moving in a circular orbit with respect to the fixed stars.

What could Newton have said in answer to this? In all consistency he should have replaced the original example by the following one. Consider in the first place the case in which our rocket ship is moving in absolute space in a circular orbit. The other ship and the universe of stars are stationary in absolute space. Consider next the case in which we are stationary in absolute space, but the other ship and the fixed stars are moving in such a way that all the relative motions are the same as in the first case. By hypothesis, the relative motions *are* the same; yet in one case we are moving in a circular orbit and so experience observable centrifugal effects, whereas in the latter case the whole universe is moving round us, we are stationary and there are no such effects. In this case, according to Mach, there *will be* such effects. For this case is (on his principles) exactly the same as the case in which *we are* moving, only it is presented under another kinematical description. The centrifugal force will reappear, only it will now be an effect of the rotating galaxies around us, rather than of our own rotation. Suppose for example that there were a rocket ship half as big as the universe, and that it was moving in a circular orbit relative to the fixed stars, and that we were stationary relative to it. If we took that gigantic rocket ship as our frame of reference, we would be stationary; if we took the other half of the universe as our frame of reference, we would be circling. On the relative theory of motion, there is no difference between the case where we and the giant are circling together, and the case where we and the giant are stationary while the rest of the universe rotates.

One is therefore forced, on the relative theory, to admit that the universe of fixed stars has a very peculiar kind of effect on objects, in that it produces on objects with reference to which it rotates a force which would, under another kinematical description, be termed a centrifugal force. The only reason that this is shocking to us is that it seems hard to believe that this body should have an effect which other bodies do not have. However, Patrick Suppes informs me that there is conclusive evidence that other bodies have the same effect, which, however, is not normally noticed because of their small mass relative to the entire universe. This effect, which has been empirically observed, removes the last trace of artificiality from Mach's answer to Newton.

Let us now inquire to what extent this answer was anticipated in Berkeley's *De Motu.* Paragraph 64 of that work reads in part:

> Further, because of the diversity of relative spaces, there are various motions of one and the same body, so that from one point of view it may be said to move, and from another point of view to remain stationary; in order to determine true motion and true rest, by which this ambiguity may be removed, . . . it would be sufficient to use the fixed stars, regarded as stationary, instead of absolute space. Motion and rest defined by this relative space can conveniently be used in place of absolute [motion and rest], *from which they cannot be distinguished in any respect.* [My italics.]

If this passage did not come immediately after the discussion of Newton's argument from rotation, I would not attach so much weight to it. But since it is meant presumably as an answer to Newton, let us see what it would imply by way of anticipation of Mach's answer. If motion relative to the fixed stars cannot be empirically distinguished from absolute motion, it follows that any body which revolves or rotates about an axis relative to the fixed stars will suffer perceptible effects of centrifugal force. There are then two alternatives. Either this is a peculiar feature of the fixed stars, which gives them therefore a unique role in physical science, or else the same property is shared by other bodies, which would mean, on a relative theory of motion, that the gravitational field of a rotating body of sufficiently large size was perceptibly different from the field exerted by a body which was not rotating. (Here "rotation" is of course relative to the body on which the force is exerted.) Now Berkeley does not distinguish these two alternatives, but there is no doubt that the disjunction of them follows at once from what he said. And in this he does not differ essentially from Mach, who distinguished indeed the two alternatives, but stated that one was in no position to distinguish between them. This, however, was a matter of practical limitations and in no way a proof that the alternatives are equivalent. Indeed, they are evidently not, for one can describe an experiment which would decide between them; such an experiment, as I said before, has actually been performed since Mach's time. The point is that however such an experiment had turned out, it would have "offered an explanation" (in the sense of Berkeley and Mach) of those phenomena which Newton considered to demonstrate the existence of absolute space.

Which of the two alternatives would Berkeley actually have held? There is no doubt that both are equally compatible with his position, as is the fact that the distinction between them is an entirely empirical affair. I think it is clear, however, that he would have been inclined to believe that the fixed stars had a special role in physics, rather than that a law as yet unknown affected the gravitational fields of rotating bodies, provided they were of sufficiently great mass. For in the paragraph of the *De Motu* immediately following the one just quoted (par. 65) Berkeley writes: "Since according to the principles of those who upheld absolute motion, one cannot know by any empirical evidence whether the whole frame of reference (*integra rerum compages*) is at rest or moving uniformly in a straight line, it is clear that the absolute motion of no body can be known."

Now this as it stands is a simple *non sequitur*. For it is quite conceivable that although no *uniform motion in a straight line* of the frame of reference afforded by the fixed stars could be empirically detected, nonetheless one could detect a *rotary* movement of that frame. In that case it is *prima facie* possible as far as this paragraph of the *De Motu* is concerned to detect the absolute motion of a body. If, now, Berkeley had maintained that the fixed stars had no *special* role in physics, but that any rotating mass would have a comparable "quasi-centrifugal" effect upon any body relative to which it was rotating, he would have said that *no* motion of the *integra rerum compages* could be detected empirically; there would have been no point in restricting himself to *uniform motion in a straight line.* Such an assertion would, however, have been an anticipation not only of Mach but also of Einstein.

BERKELEY WAS RIGHT

BENSON MATES

BERKELEY was right about a large number of important issues, in fields ranging all the way from politics to physics and mathematics. But my remarks will be restricted to what was perhaps his most famous contention, namely, that in respect to sensible objects "to be is to be perceived." I think that he was right in rejecting the proposition that sometimes the immediate objects of perception (ideas, or sense data, as they are nowadays called) continue to exist when they are no longer perceived. The question whether the rejected proposition should be considered logically false, factually false, or simply devoid of content is interesting and important philosophically, but I shall be mainly concerned with establishing that at any rate it is not true.

Our subject, then, is epistemological. Most of what I shall say will be only too familiar to the initiated, who will recognize that it has been said more felicitously many times in the past. Much of the old apparatus will appear, including the bent oar, the pressed eyeball, the amputated limb, and the blind man made to see. As always, those who are unaccustomed to the ways of epistemologists will be astonished at the elaborate manner in which even the simplest things are treated. I make no special apology for this, since the subject is extraordinary and in dealing with it one cannot avoid making statements which will strike people as exceedingly odd. In any case we shall follow the advice of Berkeley and Plato to be more concerned with the truth or falsity of what is asserted than with how it may sound to untutored ears.

In his introduction to the *Principles of Human Knowledge* Berkeley makes some very astute comments on language. These include two important points which must always be borne in mind if one is to appreciate the strength and subtlety of his arguments. The first concerns general terms. There is a received opinion, he says, to the effect that a general name such as "triangle" always stands for a single idea, which in this case would be the so-called abstract general idea of triangle. But the received opinion is false, for there are no such things as abstract ideas. A general name is general because it indifferently denotes a great number of particular ideas and not because it denotes an abstract general idea. This does not mean that all general words are ambiguous, he adds, since "'tis one thing for to keep a name constantly to the same definition, and another to make it stand every where for the same idea: the one is necessary, the other useless and impracticable."[1] We are thus warned not to assume that every meaningful word designates some single thing; in other words, we should be on our guard about inferring the existence of entities from the meaningfulness of terms which seem to denote them.

Berkeley gives another warning which is perhaps even more important than the foregoing, especially in discussions of epistemology. It concerns the dangers of allowing ourselves to become so preoccupied with our words that our attention is drawn away from what we are talking about. Metaphysicians are doubtless the most frequent victims of this tendency because, so many of their nouns having little sense and no denotation at all, they are naturally inclined to follow something like the *Alice in Wonderland* advice to "take care of the words and let the sense take care of itself." Berkeley resolves to behave otherwise. He says:

> It cannot be denied that words are of excellent use, in that by their means all that stock of knowledge which has been purchased by the joint labours of inquisitive men in all ages and nations, may be drawn into the view and made the possession of one single person. But at the same time it must be owned that most parts of knowledge have been strangely perplexed and darkened by the abuse of words, and general ways of speech wherein they are delivered. Since therefore words are so apt to impose on the understanding, whatever ideas I consider, I shall endeavour to take them bare and naked into my view, keeping out of my thoughts, so far as I am able, those names which long and constant use hath so strictly united with them . . .[2]

The point of this remark, it seems to me, is that we should always remember just what it is that we are talking about, and never become diverted into making empty and misleading deductions based upon the senses of the terminology we happen to be using.[3] Berkeley says that he hopes in this way to get clear of all purely verbal controversies, adding that so long as he confines his thoughts to his own ideas divested of words, he does not see how he can easily be mistaken. Clearly, his goal is to ensure that the truth of his statements shall depend only upon the characteristics of the objects discussed and not upon the particular senses of the names or descriptions which might be chosen to denote them.

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[1] Berkeley's *Works*, ed. A. A. Luce and T. E. Jessop (London: Nelson, 1948–), Vol. II, p. 36.

[2] *Ibid.*, pp. 38–39.

[3] In speaking of an object one has ordinarily to use a linguistic expression denoting that object, but often the sense of the most usual and convenient expression with the right denotation will lead to unwanted consequences. Thus, for example, if I wish to speak of toothaches the most obvious term available is the word "toothache." But the sense of that word is probably such that the sentence "If there were no teeth, there would be no toothaches" is analytic, whereas I may wish to regard it as expressing a matter of fact. Consequently I may have to use instead such a philosophic barbarism as "a toothache, considered in and of itself, apart from possible connections with teeth," or perhaps "what most English-speaking people are accustomed to denote by the word 'toothache.'" Probably a better alternative is simply to use the word whose sense doesn't quite fit, and to follow Berkeley's advice about keeping one's eye on the denotation. This amounts to treating the word as though it were what Russell has called "a logically proper name."

SENSE DATA AND MATERIAL THINGS

Bearing these warnings in mind, let us endeavor to come to close quarters with the problem. I have to begin in the usual way, with a few basic distinctions. These will be thoroughly familiar to every student of epistemology, and I have noticed that no one (with the exception of certain sophisticated philosophers who are struggling with little success to adopt something they hopefully call "common usage") ever reports much difficulty in grasping what is intended.

It seems that when we speak of seeing, hearing, tasting, or otherwise perceiving something, we may be using these verbs of perception in either of two senses. Consider the verb "to hear," for example. In one sense of the word we say that we hear bells, trains, fire engines, and other things of that sort. In another sense, however, we shall insist that "strictly speaking" one can hear only *sounds,* and that what is called "hearing a fire engine" is really only hearing a certain sound which one judges or presumes to come from a fire engine. Again, in the former sense it is perfectly possible (and, indeed, quite usual) for a number of people to hear the same thing; but in the latter sense, when we take account of the fact that the quality of an auditory experience depends greatly upon the peculiarities of the individual's nervous system, we say that it is extremely unlikely that two persons should ever hear exactly the same thing. Correspondingly, two senses may be distinguished in the ordinary usage of "see." In one sense, we see material things like books, chairs, tables; in this sense different people, differently situated, may often be correctly described as seeing the same thing. But there is also another sense of "see" in which the character of what is seen depends upon one's position, the lighting, and, above all, the condition of one's nervous system. In this sense of the term two people who are looking at the Campanile will not see exactly the same thing, if for no other reason than that their perspectives will be different. Following Berkeley we may say that they see light and colors, just as in the other case one hears sounds, not things. The word "perceive" exhibits a similar ambiguity. In one of its senses we can perceive material things, but in the other sense we perceive only what may be called "the immediate objects of perception," such as tastes, colors, sounds, pains, etc.

It ought to be emphasized that in each case both of the senses are manifested in the ordinary usage of the term. In particular, it is a mistake to suppose that the "direct" senses were invented by philosophers, who thus contrived to muddy waters that would otherwise have remained clear. We need these "direct" senses of perception-verbs precisely because of the existence of the immediate objects of sensory perception, a matter which in no way depends upon one's choice of linguistic idiom. A person whose ears are ringing as a result of some abnormal physiological condition is not really hearing bells, but he is hearing *something,* and that something is very like what he would be hearing if he were really hearing bells. Likewise, the person who is having a hallucinatory visual experience is seeing *something.* If it seems odd or unsatisfactory to say that he is seeing light and colors in certain patterns, or hearing sounds, we are of course welcome to describe the facts in any manner we choose. But we must not let the difficulty of finding a satisfactory description cast doubt on the existence of what we are talking about.

A wide variety of terminology has been used by philosophers to refer in general to these immediate contents of sensory experience. Berkeley, in common with others of his time, used the word "idea." Nowadays the expression "sense data" is perhaps the one most widely employed. Another favorite phrase is "the given," and we find also the terms "sensa," "sensibilia," "percepts," "phenomena," "appearances," and many others. In this connection, however, there is an important point to be made. It can be stated most compactly by means of Frege's distinction between the sense and the denotation of linguistic expressions. The point is this: each of the terms mentioned has the right denotation, but none has just the right sense. Indeed, it seems to me that when these words are used in epistemological discussions they are best regarded as though they were ostensively defined expressions, having denotation but no sense at all. Attempts to give them sense (i.e., to find non-ostensive definitions for them) seem to result only in discussions which have no connection with the subject matter. For instance, some people have erroneously supposed that by using the term "sense data," since it is of plural form, one commits oneself to the view that the given is somehow built up out of a number of granules or patches, each of which is *one datum.* There have also been objections to the term "given" on the ground that a given implies a giver and a receiver. Likewise, if we employ the word "appearances" we run the risk of having someone infer that we do not regard the data as real. Those who say that sense data do not exist, i.e., that there is no such thing as a sense datum, are wallowing in the same bog. They are dealing with the term "sense datum" as though it were an abbreviation for a descriptive phrase, as though to be a sense datum were to be a such-and-such. But it isn't. We give all the information necessary for the correct use of this word when we somehow indicate what we intend as its denotation. As soon as one learns to what the term refers, and nothing can be easier than to become acquainted with this, one realizes that the sentence "Sense data do not exist" is either false or devoid of sense.[4]

The same considerations apply to Berkeley's own use of the word "idea." Those who imagine that they discover in his writings a *definition* of this term, and who then, on the basis of this "discovery," conclude that his famous thesis is merely "true by definition," have managed to miss the point completely. To such critics he would say, perhaps, "I am using the word 'idea' merely as a label for certain things so near and obvious that a man hardly need open his eyes to see them. I wish to say of these that their existence consists in their being perceived. If you don't approve of my label for them, use your own. My thesis will not be affected thereby, for it has nothing whatever to do with the word 'idea' or any particular way in which you may imagine that I define it. As I have said many times, let us attend to what is signified and draw away our thoughts from the words which signify."

In line with this point of view, then, I shall use the terms "sense data," "the given," etc., simply as labels for sounds, tastes, colors, pains, and whatever else is immediately perceived. Let me remind you once again that I am only telling you what the denotation of these terms shall be, and that I am not attempting to give them the sense of the expression "what is immediately perceived" or that of any other expression.

Next, it should be noted that sense data are not to be identified with material things like books, chairs, and tables. Innumerable arguments, many of which date back to antiquity, have been offered for this assertion, and I find nearly all of them in some measure convincing.[5] For instance, it is obvious that we never perceive the same sense data by means of different senses, for, despite what such people as art critics and poets sometimes say, nobody ever sees a sound or hears a color or tastes an itch. But we often do see, hear, and touch the same material thing. Hence, whether these perception-verbs are considered univocal or their senses differentiated on the basis of the considerations presented above, we have the conclusion that the data are not material things. Further, everyone knows that the nature and perhaps the very existence of the data depend not only upon whatever material thing (if any) is stimulating our sensory apparatus at a given time, but also upon many other factors. Thus the data may vary while the material objects with which they are most apt to be confounded remain unchanged, and hence we cannot identify the two. In addition, there are all the so-called "arguments from illusion." If one looks at an oar that is partly submerged in water, what one directly perceives does not have the same shape as the oar. No amount of linguistic juggling can alter this simple fact. Another example dating back to antiquity involves pressing gently on the side of the eye while looking at a flame: we find that we then see two lights, each of which seems equally real and equally similar to the one light which is perceived when the pressure is removed. Indeed, by the simple operation of removing his glasses, any nearsighted scholar can obtain a plethora of fuzzy visual data which he will feel no inclination whatever to confuse with material things or their surfaces. The most persuasive evidence, though, is afforded by complete illusions and hallucinations. People can see water that isn't there; they can feel pains in limbs that have been amputated; they can be made to have visual data when there is no external stimulus whatever. Such data cannot plausibly be identified with any physical objects whatever, but they are often indistinguishable ("internally," at least) from the data intuited under more normal circumstances. Thus, in general, the sense data we perceive are different from the material things with which they are sometimes confounded. I should add, for the sake of clarity, that when I say that sense data are not material things, I do not commit myself to a belief in matter.

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[4] Thus, in learning to use proper names we inquire concerning the denotation, not the sense: "Who was Aristotle?"—not "What does the word 'Aristotle' mean?" If we get the answer, "Aristotle was Plato's disciple and the teacher of Alexander the Great," we do not accept this (contrary to Frege's opinion) as expressing the sense of the word "Aristotle," but only as indicating its denotation. Hence even after such an answer we shall not be inclined to accept "If Alexander had a teacher, it was Aristotle" as analytically true by virtue of the meaning of the word "Aristotle." We do not regard the word "Aristotle" or any other similar proper name as an abbreviation for a description.

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[5] It seems to me, by the way, that the antiquity of the problems of epistemology should be a caution to those who would cure those problems by reviewing the so-called "ordinary usage" of the terms involved. No consideration relating to the ordinary usage of a term in English is likely to be relevant unless the same consideration holds for the ordinary usage of the corresponding terms in Greek, Latin, and the other languages in which the same problems have been formulated.

On the other hand, although our data are not to be identified with physical objects, they are obviously very closely related to them. Usually, and fortunately for us, a gross change in the physical object perceived produces a change in the datum. At the same time, the simplest facts about the process of sensation suffice to indicate that the data are more closely connected with our own bodies than with any other material objects—"more closely" in the sense that only if the change in the external object produces a change in our body will it produce a change in the data. Indeed, by making certain very slight alterations in the state of his sensory apparatus (for example, by closing his eyes) anyone can produce such changes in the data as would require a cataclysm in the external world for their duplication.

Another important relationship between data and material objects is that the data are in a sense epistemologically prior to the objects. Whenever I am justified in asserting of some physical object A that I perceive A, there is always in that situation a sense datum B which, if my assertion is correct, is caused by A, and which in any case is such that I am even more justified in asserting that I perceive B (in the other sense of "perceive," of course). The same holds concerning assertions that I perceive a physical object A as having some property. In this sense, at least, I know the data better than the material objects; or, stating the same point backward, it is easier to be mistaken about the objects than about the data. In fact, it is plausible to hold that fundamentally all the evidence for sentences about material things must be found in the given. This applies in particular to those sentences which describe correlations between the physiological states of a perceiver and the qualities of the sense data he perceives. Even the evidence for these will boil down to certain regularities in the data.

In short, then: there are sense data; they are not material objects; they are better known than material objects and causally dependent upon them, especially upon the nervous system of the perceiver.

THE MEANINGFULNESS OF CERTAIN SENTENCES PURPORTING TO BE ABOUT SENSE DATA

Now ordinary discourse is for the most part concerned with material things and not, except indirectly as noted above, with the data of sense. That is to say, in most cases the nouns of ordinary discourse are taken as denoting physical objects, if anything at all. When we add to our vocabulary the term "sense datum" and other expressions referring to what is immediately perceived, we notice at once that certain types of assertions and questions which are significant enough when applied to material things, take on a very questionable status when they refer to data. For example, concerning any material thing it makes sense to ask whether it is wholly inside or at least partly outside someone's brain, with the presumption that one and only one of these possibilities will obtain. But when we ask whether a datum experienced by a given individual lies inside or outside his brain, we find that neither alternative is satisfactory. Probably the most natural answer is that sense data aren't the kinds of things that have spatial locations, at least not in the same space with material things. Similarly, when one is asked what the other side of a sense datum looks like, one has to reply that sense data don't *have* any other side (in the sense of "a side that is not perceived"). A further question which has bothered epistemologists is whether the data can have any qualities they do not appear to have. Here again, one feels that something is wrong with the question. Data *are* appearances. It is not clear what can be meant by asking of an appearance whether it can appear to be other than it is. In all such cases a mode of speaking which is perfectly intelligible when applied to material things leads to difficulties when extended to the immediate objects of perception.

Similar tangles may result from even the most elementary attempts to describe data by using predicates customarily applied to material things. To borrow an example given by H. H. Price, a striped tiger always has a determinate number of stripes, but although it is perfectly correct to describe a visual impression of such a tiger as something striped, it may at the same time be incorrect to describe the datum as characterized by any particular number of stripes. In general, even if all A's are necessarily B's, it is possible for something to be an appearance of an A without being an appearance of a B. Consequently, there are traps waiting for anyone who follows the natural inclination to describe data by using predicates true of the objects of which the data are appearances.

Such difficulties as these give some basis for caution and skepticism concerning the meaningfulness of various sentences purporting to be about sense data. It cannot be lightly assumed that every meaningful sentence concerning material things remains meaningful when its subject term is replaced by an expression denoting a datum of sense. This raises at once the question of a criterion of meaning. It seems to me that almost the only such criterion which is at once plausible, applicable to natural languages, and fairly clearly formulated is that of verifiability.

According to this, a sentence is cognitively meaningful if and only if it is analytic or contradictory, or else can be verified or falsified in the given. The word "can" is here intended to refer to logical (as contrasted with physical) possibility, and no essential reference to the present time is involved. The verifiability criterion, with all its difficulties, has at any rate been clear enough to be recognized by the metaphysicians as a great bogey. Nearly all their doctrines appear to be unverifiable, and nothing seems to be so irritating as the suggestion that one's utterances are not even meaningful, let alone true. So it is hardly surprising that after twenty-five centuries of unrestrained speculation (if that is the right word) they now cry "Foul!" when someone menaces their accumulated profundities with the dread epithet "nonsense!" But I am digressing; the only statements whose meaningfulness I shall question are some favorites of my own.

The sentence which Berkeley rejects, namely, "There exist ideas that are not perceived," appears at first glance not to pass the test. For the given consists exclusively of ideas that *are* perceived; hence, no amount of scrutinizing the given will even turn up an idea that is unperceived. Let me remind you, however, that even if the sentence is cognitively meaningless, Berkeley was right in refusing to accept it as true. Of course in this event there is a legitimate doubt that he was right in considering its negation demonstrable.

Before attempting to go more deeply into this matter I shall take up an easier but somewhat similar case for comparison and contrast. It concerns the problem of the privacy of experience, or the "egocentric predicament," as it is sometimes called. This problem may be presented as follows. Obviously, certain sense data are (as a matter of fact, not of definition) accessible to me in a way in which they are not accessible to you. For example, nothing is easier than for me to determine finally and conclusively whether or not I have a toothache (disregarding certain borderline cases irrelevant to the point); but it seems that if you wish to make the same determination you will have to ask me, or watch my facial expressions, or examine my teeth, or perhaps even make an elaborate study of the state of my nervous system. Even when all this research has been done you must still admit, unless you have been sufficiently confused by recent philosophy, that since having a toothache is not the same as complaining, or grimacing, or having cavities in one's teeth, or even having one's nervous system in a certain condition, you may be mistaken when you conclude from such evidence that I have a toothache. When the question concerns *your* thoughts and feelings, our roles are reversed; it could cost me infinite time and trouble to obtain a probable opinion about matters that are completely obvious to you. This serves as a reminder that the only sentences I have an opportunity to verify or falsify in the given are those which directly concern the data accessible to me; presumably, the analogue holds for you. And so a serious question arises, namely: how can I even say anything meaningful about your experience, let alone believe or know anything about it?

In view of this, some of the advocates of the verifiability criterion have concluded that when I say "I have a toothache" I am using the word "toothache" in one sense, and when I say "you have a toothache" I am using it in another. Similarly, the sentence "Mates has a toothache" cannot have the same meaning for you that it has for me; in fact, it will turn out that the only sense of "toothache" in which I can tell you about my toothache will be one in which toothaches do not hurt and are hardly worth talking about. The same difficulties will beset all other attempts to communicate about one's data; no word describing my experience will mean the same for you as it does for me.

A semantical theory which leads to such consequences is certainly paradoxical. According to the natural view, when I say that you have a toothache, I simply mean that you feel as I feel when I have a toothache; and although I am prepared to grant that your toothache is likely to be accompanied by the usual observable concomitants and hence that the presence of these may serve to indicate with high probability the presence of the ache, I would nevertheless insist that when I ascribe a toothache to you I do not *mean* that these observable concomitants are occurring, but rather that you have a certain sort of feeling. In my own case I can easily tell the difference between the feeling itself and the grimaces, complaints, swellings, defective teeth, and other phenomena which you would use to determine that I had the feeling. I see no reason to doubt that your situation in this regard is similar to mine. This is the common view of the matter, and if our semantics is to accord with it, we shall have to make some changes in the verifiability criterion.

Probably the best way of accomplishing the necessary alteration is to liberalize the criterion by introducing confirmability in place of verifiability. There will thus be recognized two kinds of meaningful sentence: (1) those which pass the test of the verifiability criterion, and (2) those which do not, but yet can be confirmed or disconfirmed in the given. The sentence "You have a toothache" will be of the second kind. I can think of no experience which would provide me with conclusive verification of it; i.e., which would allow me to ascertain the existence of your toothache with the same directness with which I can ascertain the existence of my own. But even though the sentence cannot be verified in the given and hence cannot be *about* the given in exactly the same way in which verifiable sentences obviously concern those portions of the given which make them true or false, it is not to be classified with utter nonsense like "the Absolute is perfect" or "the Nothing nots." The crucial difference, it seems to me, is that for sentences about other people's feelings we can specify in advance what experiences on our part would tend to confirm or disconfirm them, whereas utterances like "the Nothing nots" are, as it were, completely *wild*—utterly untrammeled by ties to possible experience. Thus, although I cannot actually observe your toothache, it is possible for me to make a number of observations which will confirm or disconfirm the hypothesis that you have one. Those who assert metaphysical vacuities, on the other hand, are never prepared to state intelligibly what difference their truth or falsity would make to possible experience, in other words, what observations would increase or decrease their probability. In view of all this, it seems plausible to draw the line between sense and nonsense at the boundary between those sentences which are subject to the control of experience and those sentences which are not.

Unfortunately, in this approach there is a severe difficulty, in effect pointed out by Hume and never, so far as I know, successfully allayed. The question is: how can a sentence be confirmable if it is not in principle verifiable? Consider an example. By virtue of the observed correlation of thunder and lightning in the past we are able, in a present case, to confirm the occurrence of lightning by noting the occurrence of thunder. If statements asserting the occurrence of lightning were in principle unverifiable, we should never have been able to observe the correlation. In fundamental cases, at least, it would appear that such observation is not merely one of many possible ways in which the requisite correlation may be established, but the only way. When one of the terms is inaccessible to observation, however, this is obviously impossible. Applied to the toothache example the argument says that the only grounds on which I would be justified in regarding your grimaces as confirming the existence of your toothache would be that I had observed these constantly conjoined in the past; and since no such observation could have been made, I am without the necessary basis for the induction.

In spite of this sort of difficulty, scientific discourse abounds with examples of statements that are confirmable but not verifiable. When any justification is given for the employment of such statements, it does not ordinarily make reference to observed constant conjunctions, but rather involves the claim that the hypothesis being confirmed has "predictive value" or that it serves to "simplify" our explanations. Otherwise, presumably, we would dispense with the hypothesis and make do with those verifiable statements which collectively constitute the evidence for it. We must note, however, that the notions of "predictive value" and "simplicity," and the general notion of "utility" as applied to unverifiable hypotheses, are all very much in need of clarification. Until this is forthcoming the philosopher will not feel reassured by claims that certain theories, though strictly unintelligible, are "very fruitful." The upshot is that statements about other people's feelings are, so far as meaningfulness is concerned, on a par with most scientific hypotheses; rightly or wrongly we regard them as confirmable though not verifiable. Further, they probably have a considerable amount of predictive value relative to observable human behavior, and they seem to make our explanations simpler than they would otherwise be. Unless, therefore, we are prepared to excise much of science from the domain of the meaningful, we cannot regard the unverifiability of a statement about sense data as a sure indication that the statement is devoid of cognitive content.

THE EXISTENCE OF SENSE DATA WHICH ARE UNPERCEIVED

Now the statement that there exist data or ideas which are unperceived is considerably more difficult than the statements which we have just been considering. With respect to it I wish only to hold that it is either false or cognitively meaningless; this would imply that Berkeley was right in refusing to accept it as true. Let us begin with the question of its meaning.

Like the statements about the existence and quality of other people's experience, the assertion that there exist unperceived ideas seems clearly incapable of direct verification; for to verify directly that a datum was existing unperceived one would have to perceive it existing unperceived, and this is utterly impossible. The assertion cannot be directly falsified, either, because of its existential character. Furthermore, even those who believe that it is true will agree that it is not analytic, as no contradiction is involved in saying that nothing exists besides the data that are perceived by me. This leaves us with the possibilities of classifying the statement as contradictory, confirmable, or nonsensical.

Berkeley's own position seems to be that to assert the existence of unperceived ideas is contradictory, because the expressions "to exist" and "to be perceived" have the same meaning when applied to sensible objects. This view is set forth in the following quotations from the *Principles:*

> 3. That neither our thoughts, nor passions, nor ideas formed by the imagination, exist without the mind, is what every body will allow. And it seems no less evident that the various sensations or ideas imprinted on the sense, however blended or combined together (that is, whatever objects they compose) cannot exist otherwise than in a mind perceiving them. I think an intuitive knowledge may be obtained of this, by any one that shall attend to what is meant by the term *exist* when applied to sensible things.... There was an odour, that is, it was smelled; there was a sound, that is to say, it was heard; a colour or figure, and it was perceived by sight or touch. This is all that I can understand by these and the like expressions.[6]

> 5. If we thoroughly examine this tenet [that sensible objects have an existence distinct from their being perceived], it will, perhaps, be found at bottom to depend on the doctrine of *abstract ideas.* For can there be a nicer strain of abstraction than to distinguish the existence of sensible objects from their being perceived, so as to conceive them existing unperceived? Light and colours, heat and cold, extension and figures, in a word the things we see and feel, what are they but so many sensations, notions, ideas or impressions on the sense; and is it possible to separate, even in thought, any of these from perception? For my part I might as easily divide a thing from it self.[7]

> 24. It is very obvious, upon the least inquiry into our own thoughts, to know whether it be possible for us to understand what is meant, by the *absolute existence of sensible objects in themselves, or without the mind.* To me it is evident those words mark out either a direct contradiction, or else nothing at all. And to convince others of this, I know no readier or fairer way, than to entreat they would calmly attend to their own thoughts: and if by this attention, the emptiness or repugnancy of those expressions does appear, surely nothing more is requisite for their conviction. It is on this therefore that I insist, to wit, that the absolute existence of unthinking things are words without a meaning, or which include a contradiction. This is what I repeat and inculcate, and earnestly recommend to the attentive thoughts of the reader.[8]

Berkeley's contention that ideas cannot exist unperceived is not, as many have supposed, based upon a definition of the word "idea." The words whose meanings are essentially involved are rather the verbs "to exist" and "to be perceived." Berkeley does not *define* either of these in terms of the other; upon reflection he *discovers* that for him they have the same meaning when applied to ideas, and he expects that the reader will make the same discovery about his own usage. In my case his expectation is correct, and I even share his confidence, to some extent, that with a little attention everyone will agree.

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[6] *Works,* ed. Luce and Jessop, Vol. II, p. 42.
[7] *Ibid.,* pp. 42–43.
[8] *Ibid.,* p. 51.

Another way in which Berkeley tries to persuade the reader is by means of his notorious demonstration that one cannot even conceive of an idea existing unperceived. As he uses the terms, to conceive of something is to imagine it, and imagination is a form of perception. Hence, if someone were to conceive an idea existing unperceived, he would be perceiving something that was unperceived, which is impossible. Therefore it is inconceivable and consequently impossible that an idea should exist unperceived. This is a tricky argument and one which I cannot accept, but neither can I understand the criticisms of others who have considered it. I believe that the difficulties are connected mainly with the meaning and grammar of the word "conceive." Some people will feel that Berkeley goes wrong when he presumes that to conceive of something is to imagine it; especially since he seems always to interpret imagination as involving images. Such an objection may have some force. It would be more persuasive, however, if it carried with it a satisfactory account of what we *are* talking about when we say, apropos of a question of possibility, that we conceive such-and-such to be the case. For example, how does one determine whether it is conceivable that the population of the world should reach four billion? Hardly by conjuring up an image of four billion persons. But to say that one does it by determining that the sentence "the population of the world is four billion" is not self-contradictory is only to obfuscate things still further. The fact is that the notion of conceivability has all the obscurity of the notion of possibility, plus an additional contribution of its own. Instead of trying to make use of it in a demonstration, Berkeley should perhaps have let his opponents try to explain what *they* meant by saying that it is conceivable that an idea should exist unperceived.

A great deal of confusion surrounds the question whether, if "to be" and "to be perceived" have the same meaning, it does not follow that Berkeley's assertion "to be is to be perceived" becomes somehow trivial. I have heard it said that Berkeley simply defined his terms in such a way as to make his principle come out true. This is not so. If you examine Berkeley's writings you will find no definitions of the sort described, and it is clear enough that his remarks do not in any way presuppose such definitions. But nevertheless, it may be argued, if "to be" means the same as "to be perceived," the whole statement "to "the one and only dilemma in George Berkeley's work"; for actually, in the course of his life Berkeley struggled with a great many dilemmas, theoretical and practical. In view of his firm conviction that a man's choices and a man's acts should be such as reason dictates, there were, among many others, puzzles—not about taking Holy Orders: that was required of every Fellow of Trinity (and, indeed, such orders were all but taken for granted!), but about the relative obligations of a life of study conjoined with an ecclesiastical sinecure, as contrasted with those of active pastoral and diocesan work; there was the dilemma reflected by the shift from his emphatic resolution in the first edition of the *Principles* to its omission in the second edition (which, as a matter of fact, followed several more publications!), namely, the resolution to "make as little use of words in my inquiries as I possibly can";[3] there were puzzles about the relative importance of opportunities in Ireland, England, and America; there were puzzles about the question whether Harvard College or Yale College was the more likely to repent its Puritanism and return to sound Anglican doctrine and hence deserve the gift of Berkeley's Rhode Island farm and most of his books.

But what is remarkable philosophically (and rather surprising, too, in view of the wonderful clarity of Berkeley's writing) is the number of dilemmas (in Berkeley's sense of the word "dilemma") that infested his philosophical work. Many of these were, I believe, a good deal more serious than Berkeley himself seems to have realized. And parts of them, or of the insights that generated them, have prompted some of the characteristic philosophical constructions that have been contrived in the subsequent twenty-four decades, and in particular in the two centuries since that tranquil death in Holywell Street which (in our town and university, that are in some part George Berkeley's monument) we are now remembering. Thus, as I shall try to show, our intellectual history has demonstrated and continues to demonstrate the fertility of Berkeley's thought. Of course, many of his problems had appeared in one way or another in work that preceded his; and many of his successors have struggled with them without paying much attention to Berkeley's formulations. But this does not diminish one's admiration for the range of puzzles his seemingly innocent vernacular discussion pointed up—or even exhibited in spite of itself. And now and then his anticipations of later work (even that of our contemporaries) makes us catch our breath!

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Another way of looking at the matter is as follows. There is a great deal of plausibility in the remark attributed to Wittgenstein that "the data have no owner." It seems impossible to find anything intrinsic to my data which would prevent them from being yours as well, or which on the other hand would ensure their belonging at least to somebody. In other words, one may well doubt whether Berkeley was right in supposing "to be" and "to be perceived" have the same meaning (or even logically related meanings) when applied to data. Hence we have to consider the possibility that the statement "there exist unperceived data" is a meaningful statement of the second category, i.e., that, although unverifiable, it can be confirmed or disconfirmed in the given.

When we do our best to take the statement in this way, we find that what appears to be the relevant evidence tends to disconfirm it. Everything known about perception indicates that our data are the joint product of a number of factors always including certain states of the nervous system and usually, but not always, including an external stimulus. The striking correlation between the occurrence and nature of data and the occurrence and nature of our neurological processes is evidence for the view that without these processes there would be no data. That this correlation exists is, I suppose, a contingent fact. It could have happened that what was perceived always depended simply upon the external stimulus and not upon the internal states of the perceiver, and if that had been the case we should have had far less reason for believing that the data do not exist independently.

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[9] *Ibid.*, Vol. I, p. 34.

[10] *Works*, ed. A. C. Fraser (Oxford: Clarendon Press, 1901), Vol. I, p. 92.

It is curious that there are many data which hardly anyone is tempted to suppose are independent of perception. Few believe that pains continue to exist when they are no longer felt, and, as Berkeley notes, most people hold a similar view about images formed in the imagination, about feelings of anger and the like, and about certain data they know to be hallucinatory. Colors and sounds, on the other hand, are frequently supposed to "belong to the object" and to continue existing "in the object" whether it is perceived or not. Now why should the data be thus divided into those which depend upon the perceiver and those which do not? If I touch a sharp object in a certain way I get a feeling of pain, but this pain is supposed not to exist unless I perceive it; if I touch the same object a little more carefully, what I feel is called a "shape" and is reckoned to belong to the object instead of to me. Where is the dividing line between feeling pain and feeling sharpness? On what consistent principle does common sense distinguish between those data that "belong to the object" and those that depend for their existence upon the perceiver?

Berkeley showed that there can be no such principle, because sometimes the same datum falls equally well into both categories. At one point in the *Dialogues between Hylas and Philonous* Hylas is inclined to believe that, although pains do not exist unless they are perceived, the case is different with heat, which really exists in the object which occasions it. But Philonous argues that to perceive intense heat *is* to feel pain, and that consequently if pains exist only when perceived, the same is true of intense heat. The colloquy goes as follows:

> PHILONOUS. Upon putting your hand near the fire, do you perceive one simple uniform sensation, or two distinct sensations?
>
> HYLAS. But one simple sensation.
>
> PHILONOUS. Is not the heat immediately perceived?
>
> HYLAS. It is.
>
> PHILONOUS. And the pain?
>
> HYLAS. True.
>
> PHILONOUS. Seeing therefore they are both immediately perceived at the same time, and the fire affects you only with one simple, or uncompounded idea, it follows that this same simple idea is both the intense heat immediately perceived, and the pain; and consequently, that the intense heat immediately perceived, is nothing distinct from a particular sort of pain.
>
> HYLAS. It seems so.[11]

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[11] *Works,* ed. Luce and Jessop, Vol. II, p. 176.

Here is a particularly clear example of Berkeley following his own good advice about never permitting our linguistic habits to draw our attention away from what we are talking about. In the situation under discussion there is present only one idea, which may be described by either of the general names "pain" or "intense heat." Berkeley keeps his attention on the idea and is not distracted by the two names; as a result, he is not tempted to join Hylas and the rest of us in a struggle to make a distinction where there is no difference. He sees that there is no basis for the common-sense tendency to make a division of data into those that somehow belong to the objects perceived and those that do not. It is commonsensical, too, to expect that there would be such a basis, and so this is a difficulty *within* common sense and not external to it.

In my opinion, the situation then boils down to this. The statement that there exist unperceived ideas is either contradictory or nonsensical or disconfirmed by the available evidence. But whichever of these alternatives we choose, we find ourselves agreeing with Berkeley (as against the "opinion strangely prevailing among men") that the statement cannot be accepted as true. He hastens to reassure us, though, that in giving up unperceived ideas we aren't losing much:

"In short be not angry you lose nothing. whether real or chimerical w^{t}ever you can in any wise conceive or imagine be it ever so wild so extravagant & absurd much good may it do you. you may enjoy it for me. I'll not deprive you of it."[12]

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[12] *Ibid.*, Vol. I, p. 65.

BERKELEY'S DILEMMA

WILLIAM R. DENNES

Of the specimens which our brethren the logicians exhibit in their museums, those to which they give the label "dilemmas, constructive and destructive" are likely to be among the more amiable items. Indeed, I here and now render thanks myself for such a dilemma which, a few years ago, served me (and served justice) rather well. I argued that if women do not differ essentially from men, then one could not fairly deny to well-qualified women appointments to teach philosophy; whereas if women do so differ from men, then it is especially important that well-qualified women teach philosophy, since philosophy undertakes to ignore no major sector of human experience. But, either women do so differ, or they do not so differ (there are some, you see, even in these "revisionist" days who still respect Excluded Middle!), therefore . . . And the young woman got the job. And I suppose that old Thomas Blundeville, in hell with Aristotle, or in paradise with Thomas Aquinas, had occasion to record the operation of one more instance of dilemma as he had defined it, namely, "an argument made of two members, repugnant one to another, whereof *which soever* thou grantest thou art, by and by, taken."[1]

But George Berkeley, like others before and after him, also called by the name "dilemmas" predicaments in which what appeared to be justified convictions seemed to require one to accept beliefs that were either irreconcilable or otherwise unsatisfactory. Thus he wrote of "that dangerous dilemma" entailed by notions of "absolute space" or "pure space" . . . "viz. [the dilemma] of thinking either that Real Space is God, or else that there is something beside God which is eternal, uncreated, infinite, indivisible, immutable. Both which may justly be thought pernicious and absurd notions."[2]

It is mainly in Berkeley's sense of "dilemma" just illustrated that I am to consider some of the puzzles in his philosophy. But my use of the title "Berkeley's Dilemma" is of course elliptical. It would be quite misleading if taken to mean what would be meant by the phrase

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[1] Thomas Blundeville (fl. 1561), *The Arte of Logick.* Plainely taught in the English tongue, according to the best approued avthors. Very necessary for all stvdents in any profession, how to defend any argument against all subtill sophisters and cauelling schismatikes, and how to confute their false syllogismes and captious arguments (London, 1617), p. 27.

[2] *A Treatise concerning the Principles of Human Knowledge,* in Berkeley's *Works,* ed. A. C. Fraser (Oxford: Clarendon Press, 1901), Vol. I; sec. 117.

"the one and only dilemma in George Berkeley's work"; for actually, in the course of his life Berkeley struggled with a great many dilemmas, theoretical and practical. In view of his firm conviction that a man's choices and a man's acts should be such as reason dictates, there were, among many others, puzzles—not about taking Holy Orders: that was required of every Fellow of Trinity (and, indeed, such orders were all but taken for granted!), but about the relative obligations of a life of study conjoined with an ecclesiastical sinecure, as contrasted with those of active pastoral and diocesan work; there was the dilemma reflected by the shift from his emphatic resolution in the first edition of the *Principles* to its omission in the second edition (which, as a matter of fact, followed several more publications!), namely, the resolution to "make as little use of words in my inquiries as I possibly can";[3] there were puzzles about the relative importance of opportunities in Ireland, England, and America; there were puzzles about the question whether Harvard College or Yale College was the more likely to repent its Puritanism and return to sound Anglican doctrine and hence deserve the gift of Berkeley's Rhode Island farm and most of his books.

But what is remarkable philosophically (and rather surprising, too, in view of the wonderful clarity of Berkeley's writing) is the number of dilemmas (in Berkeley's sense of the word "dilemma") that infested his philosophical work. Many of these were, I believe, a good deal more serious than Berkeley himself seems to have realized. And parts of them, or of the insights that generated them, have prompted some of the characteristic philosophical constructions that have been contrived in the subsequent twenty-four decades, and in particular in the two centuries since that tranquil death in Holywell Street which (in our town and university, that are in some part George Berkeley's monument) we are now remembering. Thus, as I shall try to show, our intellectual history has demonstrated and continues to demonstrate the fertility of Berkeley's thought. Of course, many of his problems had appeared in one way or another in work that preceded his; and many of his successors have struggled with them without paying much attention to Berkeley's formulations. But this does not diminish one's admiration for the range of puzzles his seemingly innocent vernacular discussion pointed up—or even exhibited in spite of itself. And now and then his anticipations of later work (even that of our contemporaries) makes us catch our breath!

The dilemma (or perhaps family of dilemmas) that I shall mainly consider is involved in Berkeley's convictions: that one knows nothing except ideas within one's mind, of which ideas the whole being is to be perceived; that there must be such ideas named by every (or in cautious moments, nearly every: cf. *Principles,* sec. 116) significant word—that such ideas are indeed the meanings of words; further, that certain ontological principles are indubitable, among them (1) the principle that ideas must always have some habitat (but a habitat other than either any congeries of ideas, or any material substance as, Berkeley alleged, such substance was conceived by philosophers); and (2) the principle that ideas must necessarily be produced by causes that are not themselves ideas or sets of ideas but seem to involve something analogous to what is experienced as effort and as acts of will; (3) the further conviction that one can have no idea of mind or spirit as acts (or as the agent performing acts) of willing or perceiving, but that one does nevertheless have a *notion* of one's own mind or spirit as engaged in producing a few ideas and perceiving many more than it produces; that one has (4) a lively and reliable idea of the order of nature as "fixed," as continuing, and as extending enormously beyond the narrow and fluctuating attention of any man, indeed, as "perfect"; and finally (5) that these sundry statements—all of them true—when taken together demonstrate that the so-called external world *does indeed exist and persist* outside of our minds, *but only* as a system of ideas created and perpetually perceived by a Universal Mind: God.

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[3] *Principles,* Introd., sec. 21.

Now it is exceedingly easy to criticize Berkeley's position on these points. But even if his position is largely fallacious, our criticism of it will still have to be appreciative criticism if we follow the decent principle that only he who is without sin should cast the first stone. Indeed, a great deal of subsequent epistemology, including work as recent as some of that of Bertrand Russell and G. E. Moore, is really bound in honor to echo the form in which Aristotle criticized Plato, and to declare: "We Berkeleyans say this, but we are mistaken—and not alone Berkeley!" For Berkeley's insistence that we try our best to know what we are talking about, that, as serious intelligences, we deal not in words as mere shapes and sounds that are instruments of display or evocation, but as names of objects in attention,—this insistence constitutes one of the main sources of the subsequent empiricist emphasis on *clarity of meaning,* and *reliance on evidence actually examined* (whether direct or indirect). And Berkeley was, I think, wiser than most of his successors (except, on this point, Hume), and than many of our contemporaries too, so far as he recognized that no general theory—still less a definition—could enable us to determine which ideas are genuinely perceived, still less which are "original" or "simple." And I suppose also that those empiricists who (mainly remembering Charles Peirce) warn us today of the pitfalls generated by what look like *bona fide* hypotheses, but are so constructed as to be immune to all possible negative (and hence also to all possible positive!) evidence—such empiricists are, I suppose, repeating Berkeley's classical criticism of such "spurious and adulterine" beliefs as the belief in matter when the word "matter" is defined to mean something one knows not what, and therefore (if not also by virtue of other definitions) uncognizable—something whose existence or nonexistence would be equally compatible with any experience whatsoever, and hence for whose existence or nonexistence nothing in experience could ever be taken as evidence.

But for all his wisdom in these respects, and his occasional warnings in *Siris* that "strictly, the sense knows nothing,"[4] I fear that Berkeley did more than anyone else in modern Western philosophy to fixate the notion that either some array of what Mr. Mates called "sense data," or else of something else often called "meanings" which we cannot perceive but of which we may have intuitions or notions, must always be the reference which makes sounds or shapes into significant symbols, and makes discourse not gibberish or spellbinding but—discourse. Unfortunately Berkeley did not take his own advice consistently and restrict himself to saying merely that ideas are whatever (and all) anyone ever considers or has in attention, and whether by perception or memory or imagination (which latter two he generally regards as also species of perception). By describing hues as (or even defining the term "hues" to mean) such ideas as are perceived by seeing, sounds by hearing, warmth and cold by touch, he broached questions that have puzzled his descendants (e.g., G. E. Moore) and which should have puzzled—or possibly unpuzzled—Berkeley himself. For if such seemingly descriptive statements mean more than would be meant by saying that hues are hues, and sounds are sounds, and warmth is warmth (and it is plain that for Berkeley they did mean more), then a distinction has been made between perception as perceptum or idea, and perception as the process of perceiving such percepta or ideas. So far as Berkeley makes this distinction (and a good many passages will scarcely bear any other interpretation), his principle that it is inconsistent (and hence meaningless) to deny of ideas that their *esse* is *percipi* becomes indefensible. For if the act or process of perceiving is distinct from the qualities and structures perceived, as Berkeley in many places insists (and indeed must insist if he is to defend a belief in the existence of minds, or even of his own mind, or of himself as an active percipient), then it is *quite possible* logically (in Berkeley's terminology it is not "manifestly repugnant") that those structures or qualities should occur or persist when not noticed. Now, to say that *supposing them to exist* when not perceived is *itself* actually to perceive them (since conceiving is a kind of perceiving) is, in Berkeley's language, to be "lost and embrangled in inextricable [and, we must add, unnecessary] difficulties." It is precisely as good or as bad as the argument of Santayana that only matter exists, when he tells us that what he means by the word "matter" is: "the actual substance of the natural world, whatever that substance may be."[5]

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[4] *Siris,* sec. 253.

To say that we cannot prove that complexes of qualities exist when not noticed if we mean by their existence their being noticed, and also by the proof of their existence, their being noticed, is at the worst to confuse an occurrence with evidence for belief in that occurrence (as Berkeley seems to do when he discusses the persistence of "yonder cherry-tree"[6]). At the best, as a reminder that things unperceived are not perceived, it *may be* a wholesome truism—and also a reminder of the queer sense of "proof" we employ if we talk of proving in a philosophical way (as against the kinds of proving we all do hundreds of times a day as we check our memories and expectations)—of proving in a philosophical way that objects exist out of attention. But there is one thing that this truism does not, and certainly could not, entail, and that is the proposition that objects do not exist except when they are perceived. Indeed, to argue that there can be no qualities such as those perceived except only where there exists a perceiver engaged in perceiving is no more respectable than to argue that there can be no data except where there exists a giver and that giver is engaged in giving.

To this theme we shall soon return since it constitutes part of Berkeley's major ontological dilemma. But I cannot resist casting a glance—not altogether tangential, I believe—at what some of Berkeley's descendants have made of his admission that we may occasionally mean by words something other than ideas perceived—something other than sense data. We all remember Bertrand Russell's insisting (in his middle period) that terms like "in" used in sentences like "I am in this room" must have meanings, if asserting or denying such sentences is to be significant, and the sentences are to be capable of being true or false; but that the universal, which is the meaning of the term "in" in "I am in this room" (since we could hardly observe that universal as occurring at any specific times or places—look high or low, in just isn't to be found here in the room; nor am I in in, etc., etc.)—that the universal which is the meaning of the term "in" must exist in a special sense of existence to be expressed by some new (or newly borrowed and specially bent) term like "subsistence." It will always seem curious, on the one hand, that Russell should have thought—or even that he should have said—that belief in the existence (as subsistent) of *in* was much more certain than could be any belief in the existence of this room, or of people who believe themselves to be in it. Yet, on the other hand, it is tempting after all to argue that I cannot understand, as I think I do, the sentence "Gauss was a mathematician" unless I understand the word "mathematician"; and to argue further that the statement "I understand the word 'mathematician' " is synonymous with "There is something which I grasp which is the meaning of 'mathematician' " and that this establishes the existence of meanings—if not as Berkeleyan ideas, then as something else.

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[5] George Santayana, *The Realm of Matter* (London: Constable, 1930), p. 140.

[6] Berkeley's *Works*, ed. Fraser, Vol. I, p. 451.

We are generally inviting trouble if we say that meanings, or anything else, exist, but not in the sense in which we ordinarily use the term "exist." It is as if we should argue with an unsuspecting cowboy, acquainted only with semidesert ranges: "You, my good man, think that only four-legged animals are stock, but you are wrong, very wrong indeed. For *we* know that some flowers are stock too, although to be sure [and this *sotto voce*], in a different sense of 'stock.' "

We have now traversed one of the antechambers—itself a dilemma or even a pair of dilemmas—that leads into the grand salon of our philosopher's ontology and cosmology. And in a mansion so ingenious as is the mind of George Berkeley it is right, I think, not to rush straight through any room, but to linger a little over details of the design, and even to consider what such a design has prompted later builders to undertake. We have seen that Berkeley's resolution to cut through words to their meanings led him mainly to what he called ideas, and that these (as Mr. Mates explained) are pretty much what some recent philosophers have called "sense data." If "ideas" or "sense data" is the name given to the class whose defining property is that its members are immediately present to attention, there is then the greatest difficulty (for Berkeley and for our contemporaries) in distinguishing in respect to this property what are ordinarily called "sensible qualities" from alleged subsistent relations, like *in,* as there is in distinguishing notions from ideas. For if we say that red spreads are seen whereas *in* is intellectually intuited, and both are thus present to attention, we are faced by the difficulty of saying what we mean by the difference between seeing and intuiting. If we define seeing in terms of presence in a configuration of ideas other than, say, the red spreads which we see, but a different sort of configuration of ideas from that we would call hearing, yet are careful to refrain from erecting on the data some sort of physiology of seeing and hearing, and dogmatizing about what may and what may not appear in the different types of configuration, then we can hardly say that anything present to attention could not be present in *either,* or in *any,* or in *none* of the configurations considered. To make a theory of sensory process restrict in any way what may be noted would be to take the occurrence of some ideas as in itself ruling out the occurrence of others, which others are not identical with the nonoccurrence of the first. And if we adopt language like Samuel Alexander's in interpreting Berkeley's notions that are not ideas, and say that we *enjoy* our acts of perceiving but *contemplate* their objects, and if the so-called enjoying is anything we are aware of (as against an unconscious transaction supposed to be lived through, or simply to take place), then notions seem to meet Berkeley's criteria for applying to them the name "ideas;" although not those criteria that would dogmatically prohibit us from saying that specific sorts of ideas could appear otherwise than in one or other of the various sorts of contexts appropriate (that is, customary) to the various types of ideas in question.

What sort of beings are ideas? If their whole being is to be perceived, then do we have an idea (or a set of ideas) which we mean by the verb "to perceive"? To this question Berkeley found it unsatisfactory to answer "yes" and unsatisfactory to answer "no"—and positively repugnant to answer "both yes and no"! In Berkeley's sense of "dilemma" (and in one of the ordinary senses), here is a prime dilemma. And such dilemmas characteristically breed other dilemmas, almost *ad infinitum.* Occasionally, very occasionally, Berkeley seems to toy with the notion, which he associates with Plato's identification of *νοῦς* with *ἐπιοτήμη*—the notion (α) that a mind is nothing but the ideas that are its objects or its content.[7] But generally (β) he means by "a mind" activities of generating or perceiving ideas, or a simple substance engaged in such activities but not itself an idea or a set of ideas, nor yet anything of which one could have an idea. But if he takes the former position (α), then ideas are (in a recent terminology) neutral entities, and to say that they are in minds is to say no more than that ideas comprise whatever complexes of ideas they do. But if he takes the latter position (β), since he is then saying that minds and their activities are distinct from ideas, he cannot rule out the *possibility* that ideas may continue in being apart from minds. Now Berkeley was so utterly sure of the opposite of this last thesis that in a moment of enthusiasm he offered to accept even the bare possibility of objects or ideas out of mind as a total refutation of his position.[8] In fairness, we should not exploit that extravagant offer. But however considerate we may be in discounting Berkeley's exuberance, we cannot deny that the *bare possibility* of ideas out of mind does prove—not, as Berkeley was willing to concede, that there are ideas *sine mente* or *extra mentem,* but that Berkeley has convicted himself of error in holding (as he characteristically did) that it is *impossible* (i.e., manifestly repugnant) for what he meant by "ideas" to be at all except as they are perceived.

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[7] *Siris,* sec. 309.

And how did Berkeley ease himself out of this dilemma? It is almost as if he had heard proleptically a poet's rendering of the advice which Mephistopheles gave to the student, who was so acutely worried lest his words lacked ideas as meanings—in effect, don't be too anxious:

> "Denn eben wo Begriffe fehlen,
> Da stellt ein Wort zur rechten Zeit sich ein."

We know nothing but ideas (similar to what many now call "sense data"), but when ideas fail us we say we have a *notion* (blessed word!) of acts and substances that are not ideas!

I have taken time to comment upon what some of our contemporaries have tried to make of such meanings as are not sense data and cannot be perceived but are nevertheless described as existing (as subsistent) and as known by intellectual intuition. I must confess that I have a good deal of confidence that Berkeley's nominalism, and his general good sense, would have saved him from the dubious constructions about subsistent entities, and realms of essence, that have been so conspicuous a part of the epistemologies and metaphysics of his and Locke's descendants. In particular, if it were clearer what Berkeley meant by the term "definition," and if there were more evidence that he himself understood and applied the insight which (on one meaning of "definition") seems to be expressed by his statement that "It is one thing for to keep a name constantly to the same *definition,* and another to make it stand everywhere for the same *idea:* the one is necessary, the other useless and impracticable"[9]—if these two conditions were fulfilled, we might well be justified in arguing that Berkeley had anticipated a major (perhaps the major and the satisfactory) solution, developed in our own day, of the "subsistent-meaning puzzle."

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[8] *Principles,* sec. 22.

When I spoke just now of dubious constructions in the epistemologies of Berkeley's and Locke's descendants, let me make clear that I meant to refer as much to G. E. Moore's long search for the *meaning* of the term "good" in order to decide whether that meaning was simple or not, was analyzable or not, and (of all things!) was definable or not; and to David Prall's (and perhaps Santayana's) insistence that all awareness is constituted by the presence of nonexistent essences to attention—I referred quite as much to those as to Russell's (and scores of other philosophers') quests for universals existent as subsistent. But whatever he might have thought about these later developments (partly inspired by his own empiricism), there is no doubt that Berkeley's determination to escape solipsism—and not only to escape it, but to prove the existence independent of our minds of the world we all believe in—landed him in the dilemma that unless he, as a finite mind, conceives an idea of the order of nature, "fixed," as he says, continuous, "perfect," "not only a magnificent spectacle, but also a most coherent, entertaining, and instructive Discourse,"[10] and if not infinite then at least so extensive that one must sometimes feel oneself (in Berkeley's phrase) lost—"lost in the crowd of worlds"—unless Berkeley conceives this idea he cannot by his arguments prove the existence of anything outside his mind; but if he does conceive this idea, since he holds that "without question that which is conceived is in the mind," his argument that God, or anything else than the mind of Berkeley, is needed to generate and maintain such a cosmic idea, is ruled out. This is the central dilemma into which Berkeley was precipitated by his attempt to escape the antechamber dilemma by adding notions to ideas in his epistemology, and by the use he made of both to try to *prove* that a world and God must exist as well as, and largely independent of, one's own mind and one's ideas. But Berkeley's notions of willing and perceiving and of the substance that engages in these acts, even if we can understand and admit them, do not help him to establish anything other than his own active existence as contrasted with inert ideas. For his own argument that dreams and frenzies may be as vivid and forceful, as involuntary, and marked by as much "outness" as are any ideas—and besides, he would have to admit, could have any assigned degree of regularity and continuity,—his own arguments prevent him from taking any idea of fixity and order that he may conceive, as itself requiring a source external to George Berkeley. In other words, if Berkeley *cannot* assure himself (and us) of the premise that he conceived a world order fixed, continuous, and nearly infinite, he has no basis for his so-called proof of the existence of the external world as ideas created and perpetually perceived by God; but if he *can* assure himself (and us) of this indispensable premise, then the alleged demonstration is invalid, for the premise is on Berkeley's own showing still true, even if the conclusion he derives from it should be false. If, that is, Berkeley actually had in mind the idea of the infinite (or nearly infinite) order of nature, on his own grounds he could not argue that there must be something outside his mind and his ideas, able (as he was not) to produce his conception of the order of nature. Can Berkeley ever have read Spinoza's *Ethics?* And above all, the great Appendix to Book I? I have myself found no evidence that he did. But what a difference it might have made to his philosophy!

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[9] *Principles,* Introd., sec. 18.

[10] *Siris,* sec. 254.

Nevertheless, if Berkeley was not always right, I think he was nearly always instructive, and more than that, that he remains instructive in nearly everything that he wrote. For what is obscure and difficult to judge, in the various attempts which other eminent philosophers have made to demonstrate the existence of entities transcendent of experience, becomes almost crystal-clear in Berkeley's work. Aristotle's "proof" of the Prime Mover upon which all nature depends but which, because He lacks matter, could be perceived by no one but Himself (and unfortunately the νόησις of God by God seems to be identical with God's simply being God)—Aristotle's "proof" appears to depend upon establishing the premise that events in the careers of substances cannot all of them terminate. God is then required as a guarantee, and also as a kind of limit, for unending process. But if Aristotle had succeeded in establishing that premise, then any guarantee would have been superfluous, and in a serious sense of "superfluous" according to which the premise could perfectly well be true although the conclusion Aristotle derived from it were false. The conclusion asserts that there is an ontological guarantee that what cannot happen (that is, what is impossible, since the statement of it is self-contradictory) also will not in fact happen. It is as if one argued that the impossible might at any time break out and happen, unless a perpetual watch were kept to forestall its happening.

Consider other examples. Descartes's correction of skepticism depends not only on his ontological inference from *cogito,* but also upon the dogma—dubious in its meaning, its alleged derivation, and its truth—the dogma that he has an idea of a perfect being; along with other dogmas about the necessity of causal relations and the kinds of things they must relate. Immanuel Kant, although his methods are very different from Aristotle's or Descartes's, had to assume, did he not, as a basis for deducing the categories of substance and cause (or for making out those categories as presupposed by experience of phenomena)—had to assume precisely that degree of continuity and regularity among phenomena which the presupposed or deduced categories were then said to institute in phenomena. And the later Russell, by assuming an initial finite probability that an external world exists, independent of cognitive acts but with some structural similarity to our experience, argues that we can increase that probability by every confirmed extrapolation prompted by, and derived from, the structure of our experience. But actually that assumed initial finite probability does not exclude an initial probability (also finite) for the hypothesis that no such world exists independent of cognitive acts, but that nature is nothing but such cognitive acts, perhaps structurally related to the order found in experience as Russell assumed the physical world to be. Although this belief appears to be opposed to Russell's, giving it a finite initial probability (which is quite compatible with giving his hypothesis such a finite initial probability) would enable us to describe the very same confirmed extrapolations as progressively increasing the probability of our hypothesis, which he describes as progressively increasing the probability of his hypothesis. As everyone knows, *very* queer consequences are likely to follow from assuming initial probabilities, or (what is a species of the same thing) initial indifference, for statements that describe any range of entities where one has no knowledge of their distribution or their characteristics.

Berkeley's dilemma seems, then, to give us a clear and useful paradigm of the risks all of us run if we attempt any sort of *ultimate* justification (or equally, any sort of ultimate refutation) of such beliefs as that the existence of most of the order of nature does not depend upon our experiencing it or interpreting it. It is one species of the risk against which Francis Herbert Bradley warned us—the risk of "giving bad reasons for what we believe on instinct," which in cynical moments Bradley thought was all that the whole enterprise of metaphysics amounts to. I doubt we should use the word "bad" as boldly as Bradley did. It is perhaps fairer to say that the reasons constructed for such theses as those mentioned of Berkeley and Aristotle and Kant are bad only in the sense that they are commonly themselves, in one way or other, merely illustrations or restatements of the very beliefs which, Bradley thought, we "accept on instinct," or, as Santayana was fond of saying, by "animal faith."

In order to satisfy the hankering for certainty, most philosophers have been tempted, at one time or other, to limit that certainty to whatever one is immediately aware of: sense data or Berkeleyan ideas. But any description or report of these will involve memory, and the belief that remembered events (including one's earlier definings, supposings, and findings) occurred as remembered, and are not merely current fictions projected backward. Of course any communication of such beliefs about sense data or ideas immediately reminds us that we are usually much more interested in the behavior of the people and things we believe to persist independent of our attention than we are in our own sense data, or in the question how far other people's sense data may resemble ours, and also that we feel as sure of the existence of such other people and things as we do of anything except truisms (whether about sense data or anything else). And when we find that for the demonstration of the existence of objects outside our attention we have to assume premises which either include what we want to demonstrate or else fail to support the conclusion, the two horns of the dilemma seem to collapse into one confusion. It is the confusion that results when enthusiasm for the justification of particular beliefs by particular evidence leads us to try to tackle what at first looks like a *deeper* problem: that of finding an ultimate justification for the whole enterprise of confirming beliefs by evidence. Now many of us are tempted to say that we do find such justification in the practical and moral uses of the habit of so confirming our beliefs. But whatever we know about such uses, we come to see upon even a little close attention, we establish by relying on further instances of precisely those general types of transactions that we set out to justify—e.g., perception, memory, and inductive confirmation. Our predicament is much like that Kant warned us against—the fallacy of arguing that if every event has a cause, then there must also be a cause for the total causal series, indeed for the totality of all events.

Of modern classical philosophers, David Hume, who owed so much to Berkeley, is perhaps alone in recognizing that if we mean by "the external world" entities or an entity that could not be experienced, then there simply is no earthly way of finding or offering any evidence for the existence of the external world which is not equally—and I mean equally—compatible with its nonexistence. But if, instead of taking that tack, we choose to mean by the names of such classes of objects as we contrast with minds, objects with the likes of which we are acquainted as enduring (and in some instances as moving) within the span of our attention, but as not showing any symptoms (such as we find in the behavior of ourselves and others) of rememberings and expectings, of hopes and of regrets, of pains and pleasures, then the distinction between minds and other existents is a distinction made within what we experience, and not a pseudo-distinction between all possible experienced objects, on one side, and something intrinsically unexperienceable, something we know not what, on the other. Relying on some such distinction within what we experience, we may say that we are quite as well acquainted (if not better acquainted) with entities other than minds as we are with those careers of felt intendings, rememberings, expectings, hopes, fears, pains, and pleasures, etc., etc., as which we sometimes say we know our own minds. But if objects (in this sense other than minds) are known to us, do they persist when not experienced, when not observed? Hume showed pretty clearly that all the typical arguments *pro* and *con* this alleged "issue" are equally compatible with either answer. And if he was right, then, as asking for proofs of the reliability of perception or of memory, or for a justification of inductive procedures for confirming beliefs, which proofs or justifications must not themselves depend essentially on perception, memory, and induction, so also asking for a *proof* that anything exists unobserved is asking for the impossible. But it is obvious that we do quite usefully and significantly check beliefs prompted by our perceptions by repeating our own observations and by comparing reports of them with reports which other people give us of theirs; we check our memories by records and by other people's recollections; we check any given inductively supported extrapolation by carrying out appropriate observations (with or without experiment). And we check our belief that our houses did not evaporate when we left them (or when we closed our eyes) by reports of the observations of others, or, if nobody was in a position to look at such houses in our absence, then perhaps by means of clocked photographs, etc., etc. But such a check of perceptions gives us only further perceptions (some of them perceptions of the talking and sorting activities carried out by other people, and of their similarities to ours); and the check itself employs throughout the very kind of activity which those who demand a *philosophical proof* of the reliability of perception say they are not willing to accept until such independent philosophical proof has been given. And so of memory. And so of what is loosely called inductive reasoning. And so also, I think, of the serious checks on our belief in the persistence of people and things and in wide stretches of nature when we are not perceiving them. Here surely Hume and Santayana are right, as against Berkeley, when they regard such a belief as itself employed in any serious attempt that has so far been made to prove its reliability; and right also in regarding it as a belief logically capable of being held or rejected (at least verbally) in the face of any conceivable evidence or argument. Beyond this, Santayana's belief in existence as uncharactered flux seems to me to be no better than a pseudo-belief in something I know not what. And Hume's undemonstrated but firm belief in the persistence outside of minds of what he called indifferently "perceptions" or "objects" and their persistence in at least some respects as we are acquainted with them, seems closer to that indispensable and irrefutable common sense which Berkeley described as "undebauch'd by philosophy" and to which he gave his highest praise, but from which he himself fell away by claiming to have *proved* that objects exist outside of our attention, although never out of mind. If Berkeley did thus fall, it was partly because he failed to recognize fully the dilemma involved in his supposed proof that all entities that exist must be produced and perpetually perceived by the mind called God, which is their sole habitation, and beyond which, or outside which, or apart from which, there could be nothing.

BERKELEY AND KANT

GEORGE P. ADAMS

To SAY anything in these present circumstances, here and now, about the philosophy of Bishop Berkeley is, of course, but carrying coals to Newcastle. Perhaps it is by way of offering a slight justification for presenting another paper in this series that I have, very timorously, appended to the title of this paper the name of another philosopher. There is another source of discomfort on my part. The problems with which Berkeley dealt appear at best to have worn thin and threadbare. And, at worst, they may appear to concern questions which ought never to have been asked, and which were asked by Berkeley because of ambiguities and confusions in ordinary linguistic usage. Once these confusions are cleared up, the puzzles evaporate. So many of the troublesome ghosts which have haunted the arena of philosophical thought are to be exorcized by verbal incantations fetched from the proper understanding of verbal usage.

I *shall* have something to say about Berkeley and, very brashly, about Kant. But I should like, first of all, to ask why it was that they asked the questions, or certain of them, which stand out so prominently in their thinking. What lies behind the questions which for them were so central and urgent?

Berkeley and Kant belong to the eighteenth century. By the eighteenth century the main outline and contours of the epoch we speak of as "modern" had become fairly clear. The foundations upon which a new kind of life and society, different from both the ancient and medieval worlds, were to be built had been laid down. Fresh energies, both of life and of thought, had been released. It may be that we are witnessing the close of an era, the breakup of that framework of life and of thought, of ideas and of institutions, characteristic of this classical modern period; for the energies which fashion a historic epoch breed conflicts and problems. The great philosophers do not invent their problems, making them up like chess problems for the sheer fun of solving them.

But it will not do to exaggerate the problems uniquely characteristic of any one historic epoch; for there are perennial and ever-recurring features of man's life and experience, of the total situation within which men find themselves. The rhythm of birth, life, and death, the practical need of reckoning with the things in one's environment, the recognition of selves and interests other than one's own, the weight of custom and tradition, the need of satisfying the basic needs of man's nature, needs and demands recurrent in each generation, such as these and much besides, constitute the constant background of the enterprise of man's living in the ever-changing epochs of his history. I make mention of this because I am going to single out two formative forces strikingly characteristic of our modern age, and I should not wish to overstress their uniqueness and novelty within this one historic epoch. They have always been resident within the human scene. But they happen to have taken on an additional increment of energy and meaning with the breakup of the medieval world, and the problems generated by their encounter acquired a fresh urgency and pathos.

Berkeley and Kant share the preoccupation of all philosophers belonging to the great tradition with the global, perennial problem of the nature of man's life and experience, with the cosmic setting and environment which is his habitat, and with the relation between these two poles of the total situation within which men find themselves. It may be that one of the signs of the end of our era is the fact that we tend no longer to ask of philosophy that it undertake any such task as this, and that many philosophers seem to welcome this release.

There must always have been some sense of the contrast between that which arises and is enacted in man's experience and that which belongs to the nonhuman world of nature. The contrast may have been blurred under the spell of primitive animism, but the radical distinction between persons and things could never have been wholly in abeyance. Theories of hedonism in Ethics, which lie tolerably close to the spontaneous attitudes and persuasions of common sense, in all ages, imply the notion of conscious life, of feelings of pleasure and pain immediately experienced by the individual. And Lucretius' saying that when we are, death is not, and that when death is, we are not, moves within the orbit of the conscious life of the individual self. And so I think it a mistake to ascribe a sense of this momentous contrast between experience consciously lived through by an individual, and surrounding things which have being but no experience, solely to the peculiar vagaries of modern thought. But unquestionably it is within the modern period that this dualism becomes markedly enhanced. The moderns neither discovered nor invented the notion of the inner conscious life of the experiencing individual. But by the eighteenth century it and the problems which it posed had come to play a dominant role. Recall the shift in the titles of philosophical writings when one goes from the ancient to the modern period. The ancients wrote περί φύσει and *de rerum natura.* The moderns write essays on The Human Understanding (the eighteenth-century equivalent of the term "experience"). The Greek thinkers from the Ionians to Plato and beyond asked the question, "What makes nature intelligible?" Kant, in this respect a spokesman for modern philosophy, asks, "What makes experience possible?" But over against the experience which the individual lives through, there is nature, material bodies in space, the system of the physical world. So great was the discrepancy between these two domains, these two opposite poles of our total human situation, that the problem of their relation to one another became inevitable and central. Our two eighteenth-century philosophers could well have borrowed the title, if not the contents, of Dewey's best book, *Experience and Nature.* The dualism of conscious life and unthinking, extended things was not foisted upon modern thought by the paternal zeal of Descartes. Descartes was but the spokesman for the energies and moving forces which he sensed as transforming and shaping the world in which he lived. The dualism of *res cogitans* and *res extensa* was already there to be reckoned with.

I should like to carry this one step further before coming to our two philosophers. This accentuation and primacy of the conscious life of the individual and the problems for philosophy to which it gave rise is one of the forms assumed by the massive sweep of the motives and forces commonly comprised within the term "modern individualism." The central problems of modern morals and politics are analogues of the theoretical problems which bothered the philosophers. How discover a common good which will appeal to the individual and also at the same time transcend his individual self-interest? How shall men organize a political order which will elicit the obedience and allegiance of individuals without, at the same time, trespassing upon the individual's own domain, his rights, and his interests? And the theoretical problem which the philosophers set out to answer, what was it but the question whether, and if so, how, the individual can transcend the boundaries set by his own individual experience and acquire authentic knowledge of the independent world out there, lying beyond all the possessions of his individual experience.

The sweep of this mighty current of individualism engulfs all the provinces of man's life and interests. But there is that other force transforming all his ways of thinking and the whole gamut of his beliefs and attitudes, denoted by the term "science," destined in due time completely to transform the scene of our daily lives. Not experience, lived through by the individual, not *res cogitans,* but *res extensa* is now the theme. Yet this outer world which goes its own way independently of anything which transpires in the inner life of conscious selves is nevertheless accessible to our minds. Its components, its structure, and the laws which govern its motions can be discovered. The achievements of Newton stand as proof. We encounter physical objects in our everyday perceptions. We see and touch and manipulate them directly, face to face. The outer world of nature transcends all that belongs to the experience of individual minds. Nevertheless, it is directly accessible to us. How?

When philosophers in the seventeenth and eighteenth centuries ask questions and write about human understanding and experience, about our perception of material things belonging to the world out there, and about our scientific knowledge of the physical universe, their analysis and thinking moves within an orbit whose two poles are individualism and science. All experience is the possession of individual selves. What is owned and enacted in experience belongs not to the world out there, but to some mind, ineluctably individual. But there is the world out there, inescapable, accessible to sensory perception and so successfully explored by the new sciences. These are two tacit premises of seventeenth- and eighteenth-century philosophy. They have no need of being explicitly formulated and defended, because they are taken for granted.

Philosophers are not exempt from the requirement that whenever anyone asks any specific question there is always hovering in the background something unquestioned, in the absence of which just that question could not be asked. If this unquestioned background and premise itself becomes subject to question and doubt, as it always can be, then the horizon of the unquestioned shifts and recedes to some further region which makes possible the new questioning. The tacit assumptions and premises of philosophers lying in this unquestioned background compromise, in a sense, what Cornford has called their "unwritten philosophies." They don't need to write them, because they and their readers take them for granted. They belong to the accepted ways of thinking, to the "common sense" of the age. The two unwritten philosophies of the age which now concerns us are telescoped within the two terms "individualism" and "science." Experience in all its modes, impressions and sensations, feelings, thoughts and ideas, volitions, hopes and fears, are possessions of an individual mind. They all lie within the boundary defined by the circumference of his individual life and experience. Beyond this boundary is the physical world, material bodies which exist and change independently of the fluctuating stream of perceptions and ideas which transpire in the career of individual experience. Although it is so completely other and independent, it is directly accessible to experience, to observation and perception, and to the enormously refined procedures of the astronomer and mathematician. How is all this possible? Here is the problem of perception and of knowledge, on all fours with the problems of morals, politics, and economics, confronting thinkers carried along by the ground swell of these two energies, individualism and science.

And now, after this too long a prologue, to Berkeley and Kant. That there exists an order of nature, independent of the ebb and flow of individual sensations and perceptions, both Berkeley and Kant, in accordance with what Berkeley calls "the plain dictates of nature and common sense," take for granted. That material objects, chairs and tables, exist and continue in existence when we cease to perceive them, is not in doubt. The sole question is, *what* they are. What sort of things are they, must they be, in the light of the unquestioned assumption that they are directly accessible to our experience, that they are immediately knowable? That they are thus knowable is demonstrated by commonsense perception and by science. But what sort of entity is it that is directly knowable? Here the motive of individualism comes into play. Anything immediately knowable must be actually experienced; it must be an ingredient in the felt possessions of an individual mind. What is directly and primarily known exists and can exist only "in the mind," in the phrase repeatedly used by Berkeley. What is directly known, face to face, must be actually experienced. Only that which is actually experienced has presence, immediacy, "warmth and intimacy," in James's phrase. When it ceases to be felt and experienced it ceases to exist. Its *esse* is *percipi*. Berkeley's "subjectivism," rightly so called, is his version of individualism. After all, the two terms, "subject" and "individual," appear interchangeable. Every subject is an individual, and every human individual is a subject. It is important to remember, however, that Berkeley's subjectivism pertains to *what* material objects are and not to the fact *that* they are. Material things, the entire furniture of earth and choir of heaven are experienced and perceived as congeries of particular sensible qualities; and sensible qualities, as we experience them, are sensations and perceptions, on all fours with feelings and emotions. They are "ideas" in the eighteenth-century use of that term. Like feelings, they exist only as they are felt and sensed, only when they are actually being experienced. Their *esse* coincides with their *percipi*. All of this is, of course, but a small hodful of coal being brought to Newcastle.

Berkeley constantly falls back upon the belief that this doctrine, and this alone, is consonant with the beliefs and persuasions of unsophisticated common sense. "I am," says Philonous, "of a vulgar cast, simple enough to believe my senses, and leave things as I find them. To be plain, it is my opinion that the real things are those very things I see, and feel, and perceive by my senses."[1] Berkeley is, I think, quite on the right track in wanting to formulate a theory which explicates and justifies so fundamental and pervasive a belief of common sense. If any philosophical theory purports to show that a belief, woven into the texture of man's experience throughout, is groundless or illusory, so much the worse for that philosophical theory. That the plain man also, at times, entertains beliefs incompatible with the belief "that real things are the very things I see and feel," I shall want presently to note. If we dignify this belief, held to both by common sense and by Berkeley, by speaking of it as a theory, it is, of course, the theory of direct perception. And this theory, viewed in the light of Berkeley's predecessors, both in philosophy and the new sciences, wears something of a revolutionary aspect. Berkeley breaks with the representative theory of perception, held to, in different ways, by Galileo, Descartes, and Locke. This theory states that sense data, the contents of immediate sensory experience, can never be identical with real material things out there in our world. They are the effects produced in us by a chain of physical, mechanical happenings which originate in something out there. But the something out there isn't the thing we perceive. We perceive only the impressions produced in us, initiated by the external, unperceived thing and carried along through intervening media until, at the very end of this causal chain, there is something which reaches us. It alone is given to us, is our datum. This is all we possess, all that we experience. Our perceptions are messages. We are aware of the sources of these messages only indirectly. External things are never encountered directly, face to face. All that we encounter immediately belongs to us, and we are cut off from the senders of these messages by a complex sequence of physical transactions and energy transformations hidden from us. Berkeley sweeps all of this away. There is nothing in physical nature which necessarily escapes our direct grasp and awareness. All of nature is immediately accessible to perceiving minds. If much or most of nature escapes our finite human minds, then surely there are other spirits and, above all, a universal mind to which the whole of nature directly appears and lies wholly open like an open book.

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[1] *Dialogues between Hylas and Philonous*, Third Dialogue, in Berkeley's *Works*, ed. A. C. Fraser (Oxford: Clarendon Press, 1901), Vol. I, p. 445.

But there seems to be something queer and odd in this procedure. Berkeley throws overboard the whole perspective of representative perception and the causal theory of perception. But isn't the only ground upon which he rejects this theory fetched from the very theory itself? It is only because he first assumes that our perceptions are the causal effects of physical processes outside of us that he is led to say that perceptions belong wholly to the mind that has them, that they are subjective modifications, ideas residing in the mind. These ideas are the only things we experience and know, the only things we need be concerned about. But why locate these things "in the mind"? Why identify them with ideas, save on the single premise that they are effects in us, generated by causes external to us? The apparent perversity of this situation has been often observed, notably by Kemp Smith. He writes: "Subjective idealism has its source, exclusively, in a supposedly necessary deduction from the belief that sensations are mechanically generated through brain-processes. . . . [The subjectivist] can only prove things perceived to be subjective by proving them to be externally related to objects as their mechanical effects, and yet this can only be done by simultaneously interpreting the things perceived in a manner which the realist standpoint can alone justify."[2] And quite in line with this account of the sources of Berkeley's subjectivism is the statement made by Mr. Pepper, if I remember rightly, that Berkeley's philosophy is an "inverted materialism."

Now, undoubtedly, this mechanical, causal theory of representative perception gave a powerful push to the development of Berkeley's subjectivism. But this is not, I think, quite the whole story. This contradiction between subjectivism and the premises from which it is here said to issue exhibits the discrepancy and tension between the claims of individual experience and the claims arising from the perspective of seventeenth- and eighteenth-century science. Had there been no representative theory of perception, supposedly required by science and taught by Galileo, Descartes, and Locke, Berkeley would still be driven to hold that everything accessible to human experience comes to life, is enacted and possessed by an individual mind. All experience, all its ingredients and phases, are possessions of an individual self or mind.

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[2] Smith, *Prolegomena to an Idealist Theory of Knowledge* (London: Macmillan, 1924), p. 52.

They are encompassed and enclosed within the boundaries of his individual life and experience. They are "in the mind." It is this drive of individualism, taken by itself, which pushes Berkeley into his subjectivism. The only world that concerns me immediately, that I can know directly, is *my* world. Any other world, *your* world, *the* world, is at best problematic. It lies across the border of any one individual's experience.

I have mentioned Berkeley's persistent desire to stick as closely as possible to the beliefs and attitudes implicit within common sense, the experience of the plain man. "The wisest way," says Philonous, "[is] to follow nature, trust your senses, and, laying aside all anxious thought about unknown natures or substances, admit with the vulgar those for real things which are perceived by the senses."[3] Yet this complete identification of real things with sensa and ideas as actually experienced is a bit troublesome for Berkeley. In general the plain man does believe that the contents of his own immediate experience are real physical things. But the plain man also recognizes that sometimes what he immediately experiences and real things are quite different. They do not always coincide. At a distance large objects look small. What is then directly present in visual experience is really small. As one approaches the object, the visual presentation becomes larger. But, of course, the real object hasn't increased in size. The ordinary language of common sense takes care of this situation by having two sets of expressions which are interchangeable. One may say either "I see yonder tower" or "I have a perception of yonder tower." The former expression is shorter and more convenient. Implicit in the second form of expression, in the phrase "perception of the tower," is the belief that there are two things, not coincident, the tower out there which I don't have as I possess my perception, and the perception which is my own possession. But Berkeley will have none of any two things. When I have what I call a "perception of the table," Berkeley warns us to stick to what I actually have and not go beyond that. When I see a table, all that I have and experience is a tabular perception.

Berkeley does recognize that the complete identification of material objects with experienced contents does diverge from common sense, at least from its language. The plain man supposes that an object seen under a microscope is the very same object which is seen with the naked eye, with its details seen more clearly. Not so, says Berkeley. "When I look through a microscope," says Philonous again, "it is not that I may perceive more clearly what I perceived already with my bare eyes; the object perceived by the glass being quite different from the former." This vulgar prejudice, that these are two different visions of the same thing, Berkeley ascribes to the confusion which takes its rise "from not rightly understanding the common language of men, speaking of several distinct ideas as united into one thing by the mind." Words, he says, were framed by the vulgar, "merely for conveniency and dispatch in the common actions of life, without any regard to speculation."[4]

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[3] *Dialogues,* Third Dialogue, Fraser ed., Vol. I, p. 466.

There are other discrepancies between the outcome of Berkeley's position and common-sense beliefs, together with the ordinary language in which they get expressed. Thomas Reid pointed out that on Berkeley's principles "the ideas in my mind cannot be the same with the ideas in any other mind; therefore, if the objects I perceive be only ideas, it is impossible that two or more such minds can perceive the same things."[5] This question, how can different minds know the same thing, is the epistemological variant of the central modern problem: how can the experiences and possessions of individual minds be transcended so that many minds may discover a common, sharable world, a common good, and build an enduring community?

Berkeley departs from the teachings of his modern predecessors in rejecting the theory of representative perception. But in another respect Berkeley agrees with his predecessors. He shares their acceptance of another assumption and premise which forms part of their unwritten philosophy. It is with respect to this tacit assumption that we may come in sight of some aspects of the philosophy of Kant, and I turn now to him. I am not unmindful of the pitfalls which here dog my steps. There are different strands and strata displayed in the development of his thought and writings. These lend themselves to various and conflicting interpretations. And I must keep as far as possible from the cumbersome apparatus which Kant employs throughout. But I think it possible to state, in fairly simple language, one of the conclusions at which he arrived and which bears directly upon that tacit assumption of his predecessors, including Berkeley, to which I just now referred. It is the assumption that the only things which one can immediately and directly know and be certain of are the present contents of actual experience. It is the premise that one can be cognizant of these without knowing anything else. Any knowledge of anything other than or beyond what is immediately experienced is problematic and precarious. There can be no immediate knowledge of anything except the contents of immediate experience. Descartes supposes that these contents are representative of things other than themselves. Berkeley wonders why anyone should bother about any such unperceived things. This premise—we may call it the premise of "immediacy"—seemed to Kant's predecessors to be self-evident because this was their reading of what was implied by the acceptance of the whole drive of modern individualism. It is just this which Kant comes to question, and if this be individualism, if individualism is wholly synonymous with subjectivism, then Kemp Smith is wholly right in saying that the "revolutionary character of Kant's critical inquiries" is shown by the fact that "these problems [the problems of perception and of knowledge as formulated by Descartes and Berkeley] are no longer formulated in terms of the individualistic presuppositions which govern the thinking of all Kant's predecessors, even that of Hume. The concealed presuppositions are now called in question, and are made the subject of explicit discussion."[6]

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[4] *Ibid.*, p. 464.

[5] Reid's *Works*, ed. Sir William Hamilton (Edinburgh, 1852), p. 284.

Kant too, like all modern thinkers, is carried along by the forces and implications which I have subsumed under the rubric "individualism." But there is that other perspective and motive, stemming from the promise and achievements of the new sciences of the physical world. Besides all that is to be alloted to the career of individual experience and mind, there is the system of nature, independent of any of the mind's possessions, which had to be reckoned with in any attempt to understand our total human situation. For Berkeley, "all those bodies which comprise the mighty frame of the world" are dissolved into the order of actual and possible sensations. Berkeley here sets the pace for the nineteenth-century positivism of Mill, Mach, and Karl Pearson. With this difference, that, for Berkeley, what for us is a congeries of possible sensations—the other side of the moon and the chair in the next vacant room—is a system of actual sensations in the mind of God. For Mill and the others, possible sensations are left hanging in the air as mere possibilities which need never be actualized.

The theory to which Kant's analysis of experience points is, on the other hand, something like this. He rejects the premise of immediacy, that nothing can be directly known save what is actually experienced. In being conscious of the contents of immediate experience we are at the same time cognitively aware of something other and distinct from that which lives in our immediate enjoyment. Real things, independent of the stream of individual experience, are known directly and not through inference. They are known *through* experience but not *in* experience.

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[6] Smith, *A Commentary to Kant's Critique of Pure Reason* (London: Macmillan, 1923), pp. 283–284.

Kant added to the second edition of his *Critique* "his refutation of Idealism." He did this because his first edition was commonly taken to be a variant of subjectivism, a restatement of Berkeley's position. In this refutation of Idealism, Kant labels the position of Descartes, that we can use the immediate certainty of self-consciousness as a basis from which eventually to infer the existence of bodies in space, "problematic Idealism." Berkeley's doctrine, which locates spatial bodies within the mind, is "dogmatic Idealism." He undertakes to point out the flaw which, he thinks, is common to both of these types of subjectivism. He comes to the conclusion that we cannot be aware of anything in our immediate experience, of anything "in the mind," as Berkeley puts it, unless we are at the same time aware of something which is no item of immediate experience, but has an independent status. In his own words, "the consciousness of my own existence is, at the same time, an immediate consciousness of the existence of other things."[7] What Kant calls "internal experience" covers, for Berkeley, the entire range of all that the individual mind possesses in its actual experience. "When we do our utmost," says Berkeley, "to conceive the existence of external bodies, we are all the while only contemplating our own ideas."[8] What Kant calls "external experience," the immediate awareness of things other than our own ideas, is, for Berkeley, wholly engulfed within and swallowed by "internal experience." Kant, on the other hand, insists, in his own words, that "internal experience is possible only through external experience." We are conscious of our own being, our own possessions, our own ideas, only so far as we are also aware of bodies in space which are not our own ideas.

I shall not venture here to recount the steps in the analysis and argument which Kant employs in his "refutation of Idealism." I should like instead to set forth, in a very free way, that aspect of the situation in which we find ourselves when we reflect upon this thing called "human experience," an aspect to which Kant seems to be directing attention in his own way. If it is Kant who puts his finger upon this aspect of our experience, and not some of his commentators who have read it into Kant, then Kant did inaugurate something of a revolution. He drew attention to a feature of all experience pretty generally, if not entirely, overlooked by his predecessors.

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[7] Kant, *Critique of Pure Reason,* trans. Max Müller (New York: Macmillan, 1902), p. 779.

[8] *Principles of Human Knowledge,* Fraser ed., Vol. I, p. 270.

Kant is saying, I think, that the range of what we attend to, are aware of, are cognizant of, is vastly larger than the range of actual experience. Is this a truism, contingent upon an initial and arbitrary definition of the term "experience"? If I become interested in, study, and learn something about the French Revolution, does it make sense to say that I know something which transcends my experience? Isn't it trivial to point out that I wasn't alive then and, of course, could not have experienced the French Revolution as contemporary Frenchmen did?

The range of what we are concerned with, interested in, attentive to, aware and cognizant of, is vastly larger than the range of what we experience. Suppose you object to this statement and prefer to say that anything I attend to thereby comes within the range of experience. Experience is utterly catholic and inclusive. It specifies no one kind of existence contrasted with other kinds. There is more involved here than the definition of a term. To identify experience with anything and everything which confronts and concerns us, with whatever one attends to, is to move entirely away from the perspective of modern individualism. In that perspective, experience is what an individual mind enacts, undergoes, and lives through in the course of the life of that mind. I shall not argue the question of whether this perspective is, historically, an ephemeral episode of a particular epoch, or whether it is a perennial ingredient of our human situation as such, which is what I believe it to be. In any case, the issue as between Berkeley and Kant arises within this perspective.

Experience, like life, is throughout temporal. It is the kind of thing that James discusses in his chapter on "The Stream of Consciousness." The live portion of the stream of individual experience is the present. All actual experience is experience of the present. There is no experience of the past, nor of the future. No experience ever literally comes to life and is relived after it is experienced and fades into the past. Yet we are concerned with the past; we study archeology and history and acquire some knowledge of a real past.

But what is present is not only set over against the past and the future; it is also that which in any way is near at hand, immediate, set over against the distant, the remote, the absent. To be present in both these ways is just what Berkeley meant by something being "in the mind." The contents of immediate experience, sense data, impressions, everything that Ward puts into the class of "presentations" such as these, are present, neither past nor future, neither distant nor absent.

Had the roll been called to ascertain who was present and who was absent, all these would have answered "Present." But how many absences there would be! All my past and future, all the pasts which antedate my past, other minds, material bodies in space, none of these would be there to answer "Present." It seems hardly worth while to spend time in calling the roll when you realize how small is the number of those present, and there are those philosophers who think it just isn't worth bothering about and that we had better skip the roll call and get on to the agenda at hand.

But, in order to be fair to this content of immediate experience which has come into the mind and answers "Present," I think we ought to let it tell its own story and in its own words. Of course, we cannot expect so primitive and elemental a thing to use language at all elevated and refined. It hasn't quite grown up yet. "Yes," it would say when the roll is called, "I answer 'Present.' But, if you don't mind—you see I can use you as a verb and not only as the name of a geographical place,—I think I ought to tell you a little bit more about myself and about some of the adventures I have had when I have found myself inside of one mind or another.

"At one time I was present in the mind of Mr. Berkeley. He called me an 'idea.' I happened then to be the idea of triangularity, not of any particular triangle nor even of any particular kind of triangle, but just the idea of *any* triangle. Now of course, I wanted to bring with me inside his mind that part of me which was the idea of triangle in general. That belonged to me; it was my meaning. But I discovered, on trying, that I couldn't get it through the door. When I told Mr. Berkeley what I had tried to do, he said, 'All I know about you is what you have brought with you. If there is anything else belonging to you which you have left outside, go get it, bring it in and let's look at it. I only know what gets inside.' I told him that I was only an image or picture, perhaps only the sound of a word, but of course I had a meaning and if my meaning was too big for me to bring in, I was sorry. How would you like it if your teacher told you to go to the blackboard and draw just triangle, but no particular triangle? I began to suspect that Mr. Berkeley was asking too much of me. But I was getting lonely without my meaning, and so I left to rejoin it.

"On another occasion I wandered into the mind of Mr. Hume. I had always wanted to get inside of his mind because I had been told that his was the kind of mind that Mr. Berkeley's mind would be when it became fully grown. Mr. Hume called me an 'impression.' That seemed odd to me because I thought an impression required something outside which made an impress upon something else. But Mr. Hume told me that he didn't know about anything outside of me. He knew nothing about my ancestors nor where I came from. He said he had just picked me up on the doorstep like a foundling. And he said that if I didn't like to be called an impression, he would be perfectly willing to call me an object. It wouldn't make any difference.

"He said he liked me and had confidence in me because I had force and vivacity. He told me to stay around a while or go hide somewhere and come back. I would have lost most of my force and vivacity, but that was all right because I would then be an idea and in so far as I resembled what I was in the first blush of youth he would still trust me. And he added that I might come across some freshly arrived impression with all its youthful force and vivacity, get hitched up with this, and become a belief. And beliefs, he said, are pretty useful things. We can't get along without them, especially the belief in causality. 'I use it every time I brew a cup of tea,' he said.

"Then one warm afternoon a lot of us impressions were lying around all over the place, helter-skelter, taking things easy, and we heard his voice. 'Come along now,' he said, 'you've been lying around here long enough. It's time to get going. Stand up, fall in line, and start marching. I want you to follow one another in regular succession. It won't be too easy for you, for you are all loose and separate. There is no necessary connection, no real connection at all, between any two of you, so I can't expect too much of you. But do the best you can. And when you get going, following one another in regular succession, we are going to play a little game of make-believe. I've gotten Custom and Imagination to help out. In fact, they are going to do most of the playing, and with their help we are going to put something over. We are going to make it look as if you weren't the loose and separate impressions which you really are, but were items of some orderly system. After Custom and Imagination have played their part, you can pretend to be something that you really aren't, and that's our game.'

"Then one day he came to me with a troubled look. 'I am bothered,' he said, 'about one thing. There are a lot of ideas hanging around and cluttering up the place which have no right to be here. They haven't proper credentials and visas. They are ideas like the idea of substance, causality, and self. All respectable ideas have impressions to vouch for them, but these haven't. They are security risks. But I'll tell you what I've decided to do. These ideas have been around for a long time. I don't want to deport them. They don't seem to be doing any harm, though I'm not sure that they earn their keep. So what I'm going to do is cook up some artificial visas for them. Custom and Imagination are going to help me—I always call on Custom and Imagination for any odd jobs around the place. I know that this is a fraud, but ideas are apt to be pretty persuasive, and I hope it won't be discovered. But I can't have these ideas around without any credentials at all.'

"I had about decided that I had better leave Mr. Hume's mind. He had hinted to me that before long he was going to splinter his self into a heap of loose and separate bits. Now I had become very fond of his self. It was kindly, gentle, and generous, and I didn't want to stay around and see it all shattered to pieces. I was just about to leave when he appeared and said to me, 'Now don't be bothered about anything I've been telling you. Don't worry. I'm going off presently to converse with my friends and play backgammon. I've put a lot of impressions in my pocket for lunch and for playing backgammon. I'll be all right. Don't worry. What I've been telling you is just speculation, speculative philosophy, nothing more. It has nothing to do with conversing with ones friends and playing backgammon. It stands just as loose and separate from them as any one impression is loose and separate from any other impression. So don't worry about how a heap of loose and separate bits can understand the rules of backgammon, to say nothing of winning the game. Philosophy hasn't anything to do with life.' Then, as he waved good-bye to me, I could still see the familiar, kindly, and wistful gleam in his eyes.

"But I must tell you about the exciting adventures I had when I was in the mind of Mr. Kant. I had set my watch by seeing him take his daily walk, so I knew I would find his mind at home. He welcomed me warmly, but said that even before I came in he knew a good deal about me. He knew that I had come from a world where there was a whole lot of space and time, a lot more than I had brought with me. He must have had my dossier all the time. Then he said he was very glad I had come; in fact, that I was indispensable. There was a time, he said, when he was caught up in the philosophy of Leibniz, when he thought he could get along without me and rely entirely upon thought and reason. He didn't just stare at me and feel my presence as the other minds had done. He asked me a lot of questions and said that, really to get acquainted with the whole of me and not only with that part of me which I had brought into his mind, he would have to use thought, judgment, and understanding, and even some things which he said he had stolen from the Logic of Aristotle and which he called 'categories.' I had never been treated quite in this way before. He said he was going to use me to discover the kind of world from which I came and to learn about the relatives I had left behind. My dossier, which he had all the time, contained some of that information—for instance, that I came from a world organized in terms of substance, causality, and reciprocity. But these were formal and relational, and he needed just me to provide the filling, like sausage meat you put into a casing. When he said he was going to use me, I don't think he intended to be cruel and mistreat me, use me just as grist for his mill, grinding me up and making me into sausage meat in the machinery of his mind. Sometimes he did seem to say this. He used long words and I was often confused. But sometimes I thought he was saying that just as that part of me which was in his mind was incomplete, so the whole world for which I was a sort of spokesman was itself incomplete and fragmentary. He called that world the world of 'phenomena.' He didn't try to tell me very much about the kind of world which would round out and complete the world of phenomena. Perhaps he wanted to leave that for some other time. He did hint that perhaps we would have to go elsewhere than to the intellectual pursuit of knowledge, to come in sight of any such world. It was all very puzzling, and I rather think that he himself wasn't at all sure of what all this might lead to. But I had heard enough to keep me out of mischief for a long time and so I left.

"I wish there were time to tell you about my visits elsewhere and my entrance into other minds, especially about one time when I got into the mind of Mr. Alexander. He told me right off that he didn't see why I thought I had to come into his mind, or into any mind; that I could have just as healthy and normal an existence outside of any mind as I would inside of some mind. I took this as a broad hint that I wasn't wanted and so I left.

"Once, I got into what had been advertised as the mind of Mr. Russell. But you know what advertisements are like. When I got inside he told me that being a mind wasn't so very different from being a chunk of matter, and that what had been advertised as his mind, and matter too, were all made up of what he called 'neutral stuff' because, I suppose, it always stayed on the fence and never took sides. The only difference between what was advertised as mind and what was advertised as matter was in the kind of company that neutral stuff kept. I was a bit puzzled when told that being a mind or being material was, like guilt, something that could be acquired by mere association. But

I'm getting a little tired and, if you don't mind, I guess that, in spite of what Mr. Alexander told me, I had better find some mind into which I can retire and rest a while."

I should like, in conclusion, to revert to one or two matters. I have said that the premise of eighteenth-century empiricism is the thesis that the basic and original data from which we have to start in any pursuit of knowledge and understanding consists solely in the present contents of immediate experience, and that one is cognizant of these without being aware of anything else. In one important respect, however, as Stout has pointed out, Hume departs from this assumption. He presupposes memory. Now, memory, Stout points out, "provides at least one clear example of immediate knowledge of existence which is not actually experienced at the time and in the process of knowing it.—Suppose a thirsty man who has just quenched his thirst. What he is then immediately cognizant of is the bygone actual experience of being thirsty, not any present simulacrum or image of it with the sting extracted. The object, or part of the object, of his thought and attention in remembering is the actual occurrence of the felt thirst as he lived through it in the past, distinguished from and contrasted with his present situation. He is not living through it while he is remembering it as past. Thirst satisfied and thirst unsatisfied are so far incompatible that they cannot both be actually experienced together."[9] Here is a clear case of immediate, noninferential knowledge of something which, as known, is no content of immediate experience, but lies beyond and outside. Something is here directly known which is not being immediately and actually experienced.

Material objects, belonging to physical nature, have the same status. All that we immediately experience is sense data and the like. But we know physical objects without actually experiencing them. This we do because the immediate felt possession of sensa and presentations is the apprehension of their incomplete and fragmentary nature. It is they which ask that they be rounded out and completed in an objective, physical world.

Kant locates the system of physical nature neither in the mind, as does Berkeley, nor in the transcendent realm of things-in-themselves, as Descartes does. There is a third territory distinct both from the fleeting possessions of individual minds and from the region of things-in-themselves inaccessible to our experience. Kant's phenomenalism is neither the subjectivism of Berkeley nor the transcendent realism of Descartes.

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[9] G. F. Stout, *Mind and Matter* (Cambridge Univ. Press, 1931), pp. 215–216. My indebtedness to the writings of Stout is evident throughout.

Of course, the term "phenomenon" and still more the term "appearance" readily carry the implication that what appears before the mind as a phenomenon is a mere appearance, really different from what it seems to be. Although this sense of phenomenon, this contrast between what things seem to be but are not and what they really are, dogs the thought and language of Kant, it does not express the radical and revolutionary character of Kant's philosophy. He points to the conclusion that the phenomenal order of physical nature is no mere seeming. It is to be taken to be really just what it is perceived and known as being. It is appearance only in the innocent sense that it appears, just as one watching for the sunrise might say, "There it is, it has appeared." The phenomenal order is known *through* experience. Only a tiny fragment is known *in* experience.

For Berkeley, nature is fairly transparent. Nature is composed of sensations and perceptions, and what these are is fully disclosed in the experience of them. Nature harbors little of mystery. It is different with Kant. Nature baffles us, and our human experience to which nature presents itself is likewise disconcerting and baffling. The world of phenomena in space and time holds conflicts and antinomies. Kant points to the conclusion that nature, as known both by perception and the sciences, isn't quite all there is to nature. If man is a child of nature, a part of nature, as we now say, then the nature of which man is a part, from which he derives the ideals in terms of which he seeks to organize his life and his world, *that* nature is more and other than nature as envisaged within the framework of the sciences. Nature isn't quite an open book written in clear-cut visual language, decipherable in principle by anyone who has hands to touch and eyes to see.

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